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CARROLL COLLEGE BULLETIN

The Annual Catalogue
1914-1915

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Waukesha, Wisconsin
March, 1915

Carroll College Bulletin

Vol. XII MAY 1915 No. 1

The Annual Catalogue

For the Academic
Year of 1914-1915
With Announce-
ments for the Year
of 1915-1916

Waukesha, Wisconsin

March, 1915

Published quarterly by the College, and entered at the Post office, Waukesha, Wisconsin, as second-class matter, under Act of Congress of July 16, 1894.

CALENDAR FOR 1915

THE FRANKLIN CO. CMI.

JANUARY.

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DECEMBER.

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CALENDAR FOR 1916

THE FRANKLIN CO. CMI.

JANUARY.

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FEBRUARY.

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MARCH.

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APRIL.

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JUNE.

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JULY.

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SEPTEMBER.

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OCTOBER.

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NOVEMBER.

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DECEMBER.

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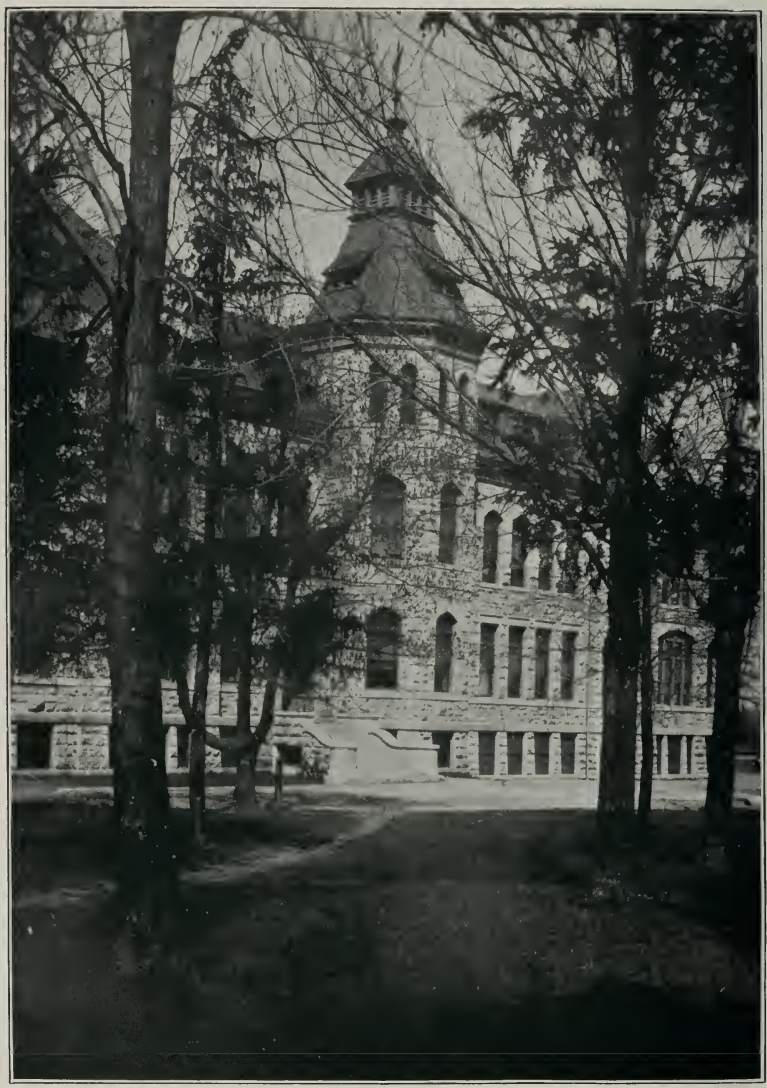

MAIN HALL

Calendar for 1915-1916

1915

February 1, Monday	Second semester begins.
February 4, Thursday	Day of Prayer for Colleges.
March 26, Friday, 4 P. M.	Spring recess begins.
April 6, Tuesday, 8 A. M.	Spring recess ends.
June 6, Sunday, 4 P. M.	Vesper Service.
June 6, Sunday, 8 P. M.	Baccalaureate Sermon.
June 7, Monday	Examinations begin.
June 9, Wednesday	Meeting of the Board of Trustees
June 9, Wednesday, 8 P. M.	Presentation of College Play.
June 10, Thursday, 11 A. M.	Chapel Service.
June 10, Thursday, 3 P. M.	Class Day Exercises.
June 10, Thursday, 4 P. M.	Annual recital by the Department of Music.
June 11, Friday, 10 A. M.	Commencement Exercises.
June 11, Friday, 3 P. M.	President's Reception.
June 11, Friday, 6 P. M.	Alumni Banquet.

September 13, 14, Monday and Tuesday, 9 to 12 A. M., 1 to 4 P. M.	Registration.
September 15, Wednesday 10 A. M.	First semester begins.
November 25	Thanksgiving.
December 17, Friday, 4 P. M.	Christmas recess begins.

1916.

January 4, Tuesday, 8 A. M.	Christmas recess ends.
January 28, Friday	First semester ends.
January 31, Monday	Second semester begins.
February 3, Thursday	Day of Prayer for Colleges.
March 24, Friday, 4 P. M.	Spring recess begins.
April 4, Tuesday, 8 A. M.	Spring recess ends.
June 4, Sunday, 4 P. M.	Vesper Service.
June 4, Sunday, 8 P. M.	Baccalaureate Sermon.
June 5, Monday	Examinations begin.
June 7, Wednesday	Meeting of the Board of Trustees.
June 7, Wednesday, 8 P. M.	Presentation of College Play.
June 8, Thursday, 11 A. M.	Chapel Service.
June 8, Thursday, 3 P. M.	Class Day Exercises.
June 8, Thursday, 4 P. M.	Annual recital by the Department of Music.
June 9, Friday, 10 A. M.	Commencement Exercises.
June 9, Friday, 3 P. M.	President's Reception.
June 9, Friday, 6 P. M.	Alumni Banquet.

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The Board of Trustees

Term Expires June, 1916.

Andrew Stevenson	Chicago, Ill.
Joseph E. Wildish	Milwaukee
Ralph Percy Perry	Reedsburg
Andrew Week	Stevens Point
Charles E. Hastings	Chicago, Ill.

Term Expires June, 1917.

Charles L. Thompson, D.D., LL.D.	New York City
Thomas S. Johnson, D.D.	Beaver Dam
Jacob Mortenson	Oak Park, Ill.
Andrew J. Frame, LL.D.	Waukesha
Arthur W. Wilcox	Horicon

Term Expires June, 1918.

Paul B. Jenkins, D.D.	Milwaukee
William W. Perry	Milwaukee
Henry W. Youmans	Waukesha
Walter H. Bissell	Wausau
William Mainland	Oshkosh
Hon. William D. Connor	Marshfield

Term Expires June, 1919.

Everett A. Cutler, D.D.	Milwaukee
Samuel B. Harding	Waukesha
Alfred S. Badger, D.D.	Waukesha
S. Frank Shattuck	Neenah
Henry Phelps	Waukesha
Albert J. McCartney, D.D.	Chicago, Ill.

President Wilbur O. Carrier, D.D., *ex officio.*

Officers and Committees of the Board of Trustees

OFFICERS

William W. Perry	President
Alfred S. Badger, D.D.	Vice-President
Henry Phelps	Secretary
Walter R. Frame	Treasurer

EXECUTIVE COMMITTEE

William W. Perry — Andrew J. Frame, LL.D.
Wilbur O. Carrier, D.D. — Alfred S. Badger, D.D.
Samuel B. Harding — Henry W. Youmans
Henry Phelps

FINANCE COMMITTEE

William Mainland — Andrew J. Frame, LL.D.
Andrew Week — Hon. William D. Connor
Jacob Mortenson

INSTRUCTION COMMITTEE

Alfred S. Badger, D.D. — S. Frank Shattuck
Paul B. Jenkins, D.D. — Joseph E. Wildish
Everett A. Cutler, D.D.

AUDITING COMMITTEE

Henry W. Youmans — Henry Phelps

VISITING COMMITTEE OF THE SYNOD OF WISCONSIN

Rev. F. Zimmermann — Rev. Oliver Stephenson

The corporate name of the college is
The Board of Trustees of Carroll College.

The Faculty

WILBUR OSCAR CARRIER, M.A., D.D.
PRESIDENT
Professor of Biblical Literature and Ethics.

SAMUEL B. RAY, M.A.
DEAN OF THE COLLEGE
Professor of Mathematics and Education.

MAY NICKELL RANKIN, B.A.
Ralph Voorhees Professor of Public Speaking and Dramatic Literature.

WILLIAM ARTHUR GANFIELD, M.A., D.D.
Professor of History and Economics.

HARRY LINN STARR, M.A.
Professor of English.

JAMES ELCANA ROGERS, Ph.D., D.D.
Professor of Philosophy and Instructor in French.

LLOYD SLOTE DANCEY, M.A.
Professor of Physics and Applied Mathematics.

SUSAN M. GUILD, B.A.
DEAN OF WOMEN
Professor of Modern Languages.

AMON BENTON PLOWMAN, Ph.D.
Professor of Biology.

EDWIN LEODGAR THEISS, M.A.
Professor of Ancient Languages.

GEORGE KEMMERER, Ph.D.
Professor of Chemistry.

JAMES WILLIAM LAUGHLIN, M.A., D.D.
College Extension Secretary.

CLARENCE E. SHEPARD
Professor of Music: Piano, History of Music, and Theory.

GENEVRA JOHNSTONE-BISHOP
Professor of Music: Voice.

BLANCHE WILLSON
Instructor in Music: Piano, Mandolin, and Guitar.

MYRTA PITTS CARRIER, B.S., Mus. B.
Instructor in Biblical Literature.

GERTRUDE SYDNIE BEAN, B.A.
Librarian and Instructor in Library Science.

LOUISE MacCAEEN NICHOLS, B.A.
Assistant Dean of Women
Instructor in German and History.

ELLA MARGARET HORNE, B.A.
Instructor in English and Latin.

JOHN EDMUND FRIES, B.A.
Instructor in Mathematics and Physical Director.

MAE B. WOOD, B.A.
Instructor in Home Economics.

MARION VAN DYKE
Instructor in Home Economics.

RONALD ELMER PARMENTER, B.A.
Assistant in Biology.

JESSIE ENGLAND WARD
Instructor in Public School Music.

HENRY ARTHUR MARTIN
Assistant in Mathematics.

CHRISTIAN FREDERIC BOECK
Laboratory Assistant in Physics.

EUGENE FREDERICK RAUE
Laboratory Assistant in Biology.

DEWITT OWEN JONES
Laboratory Assistant in Chemistry.

GEORGE WHITFIELD WINCHESTER
Laboratory Assistant in Chemistry.

CLARENCE ARTHUR PHILLIPS
Laboratory Assistant in Biology.

Other Officers

SAMUEL B. RAY, M.A.
Registrar and Secretary of the Faculty.

AMON BENTON PLOWMAN, Ph.D.
Curator of the Museum.

MRS. LILLIAN CRAVEN
Matron of Elizabeth Voorhees Hall.

ALTHIE ANTHIENETTE PITTS
Secretary to the President.

RONALD ELMER PARMENTER, B.A.
Service Secretary.

B. W. WATT
Custodian.

COMMITTEES OF THE FACULTY

Curriculum and Schedule—Ray, Starr, Plowman.

Library—Bean, Starr, Theiss.

Graduation—Ray, Theiss, Ganfield.

Publication—Starr, Ray, Bean, Plowman.

Public Exercises—Ganfield, Rogers, Rankin, Nichols.

Rules and Discipline—Ray, Ganfield, Guild, Plowman.

Athletics—Dancey, Kemmerer, Fries.

Property—Kemmerer, Fries.

Student Organizations—Plowman, Ganfield, Guild.

Social Affairs—Kemmerer, Horne, Theiss.

Religious Work and Christian Organization—Ganfield, Rogers, Guild.

President Carrier, ex-officio member of all committees.

CARROLL COLLEGE

"A college, according to the common definition, is the place where certain general studies are taught, such as mathematics, the humanities, the sciences." It is this. But it is far more than this. It is "an aggregate of influences which should act upon young men during the plastic years in such a way that on attaining manhood they may be able to confront the world with success." In this conception of the term, the college is a distinctively American institution. Its origin, and the determination of the nature of its development, are to be found in the conditions of American life and character, conditions demanding large vision, adaptability, power of initiative, combined with a high sense of personal responsibility.

Advantages of the College

For the realization of these ends the college possesses distinct advantages. Here the student will do his work with classes of moderate size, with required recitations, and with examinations. He will be subject to the personal influence of his teachers, men and women chosen on the basis of sound scholarship, broad culture, and high character, and will receive from them such personal attention as is necessary for the development of his highest individual possibilities. Here he will find adequate equipment for his needs, and, at the same time, all the opportunities for study, for investigation, for culture, that he can successfully appropriate in his undergraduate course. The moderate size of the college community makes it possible for the individual student to comprehend, in his experience and opportunities for contact, all, or a very considerable portion of, the interests and activities of the institution, rather than a relatively small and isolated portion, as in the larger and more pretentious institutions. Hence it is that the graduates of the college have had so large a share in the leadership of our country.

Purpose of Carroll College

It is the primary purpose of Carroll College to maintain and promote the ideal of a broad, liberal culture, to direct its activities and methods toward the development of mind and character, the making of men and women, in all its plans and methods recognizing the principle that a broad foundation of general culture should precede all specialization and professional training, and that the successful life work of a scholar, or man of affairs, is conditioned on the symmetrical development of the whole man.

Courses of Study

At the same time due recognition is given to the conditions and demands of contemporary life. Recent and prevailing tendencies in our educational system and ideals have thrown added emphasis upon the function of the college in the training of the individual for the service of society. The largely increased, and increasing, demands of professional and technical training, the need of greater adaptability and command of individual powers in commercial and industrial life, make the disciplinary and cultural training of the college increasingly necessary for success in these lines. The courses of study of Carroll College represent an attempt to preserve a just balance between studies of cultural and disciplinary character and those possessing an intrinsic practical value. The system of major and minor studies, of broad and representative required subjects, with large opportunities for elective work, makes it possible for the student, while pursuing a liberal course, at the same time to concentrate his attention and effort upon some one subject to such a degree as to realize in that subject a considerable acquisition and attainment, some degree of mastery, which may be utilized in a practical way after graduation.

Any of the following subjects may be chosen as a major: Philosophy; History; English; Biology; Mathematics; German; Latin; Chemistry; Physics. Certain other subjects not offered as majors may be taken in conjunction with cognate subjects to constitute a major. The suggested groups given under the various departmental statements in this catalogue show some of the possible courses.

Atmosphere of the College

Carroll College is pre-eminently a Christian College. While high scholarship and broad culture are emphasized, the supreme importance of things spiritual is constantly recognized. The Bible is given its rightful place in the college curriculum, and the principles of Christianity are inculcated in the chapel service and in the class-room. The members of the faculty are all Christian men and women who endeavor to present truth from the standpoint of reverent regard for things sacred and eternal, and to help the students rightly to interpret the facts and laws of life. The atmosphere of the college is distinctly religious, but not sectarian. Loyal to the trust imposed by the Synod of the Presbyterian Church of Wisconsin, the college seeks to foster a strong spiritual life, interpreting the spiritual life, not as something distinct and apart from the other phases of life, but as the finest development of them all in perfect and harmonious combination. Several Christian denominations are represented in the Board of Trustees and in the Faculty, and students of all denominations find here a friendly and congenial atmosphere.

Carroll College a Coeducational Institution

As men and women are intended for mutual service and in all the phases of life are associated, the ideal condition for their mental and moral development is, not segregation, but association, of the sexes. The policy of coeducation has been adopted in the belief that it is the natural method of training young people. It lessens the dangers of college life and increases its advantages. The healthful interchange of thought and feeling serves as an intellectual stimulus and a moral restraint, while the normal association of young men and women in class-room and in all social and literary activities of the college, tends to broaden the sympathies, and to awaken true manliness and womanliness.

Location

Waukesha, a city of about ten thousand inhabitants, is picturesquely situated in the midst of the rolling country of the Fox River Valley, a country of hills and lakes, of woods and

fertile fields. The college buildings are upon the heights in the south part of the city, and command an extended view of a rarely beautiful landscape. The beauty of the surrounding country, the proverbial healthfulness of the locality, and the purity of its far-famed waters make it a most desirable place of residence. Because of the proximity of Milwaukee many of the advantages of a large city are realized. The moral tone of the community is wholesome, and the people are deeply interested in all educational work. The many churches of the city offer opportunities of Christian association and culture.

Waukesha is located on lines of three principal railway systems of Wisconsin, the Chicago and North Western, the Chicago, Milwaukee and St. Paul, and the Wisconsin Central division of the Minneapolis, St. Paul and Sault Sainte Marie, and is thus easily accessible from all parts of this and adjoining states. It is one hundred miles from Chicago, by any of the above-named roads, and twenty miles from Milwaukee. Hourly service to the latter city is provided by the electric interurban railway, and frequent service by two steam railways.

Campus

The campus consists of a wooded tract of fifteen acres on the hills to the south of the Fox River, a most favorable situation for the college. An historic interest attaches to the campus in the presence here of several large Indian effigy mounds and an Indian cornfield.

Equipment

Carroll College is well provided with the equipment necessary for the work of a progressive college.

Plans have been made for a consistent and harmonious group of buildings, four of which have been erected and are now occupied. These are all handsome and substantial structures of stone. They are heated from a central steam plant and lighted by gas and electricity.

RANKIN HALL OF SCIENCE

Main Hall

Of this group the central building is Main Hall, completed in 1900. This is a substantial building of stone, beautiful in appearance and convenient in arrangement. In the basement or ground floor, are the gymnasium and bath and locker rooms for young men. The first floor contains the offices of the college, the rooms of the music department, and several recitation rooms. The library and chapel occupy the entire second floor. On the third floor are several recitation rooms and the Y. M. C. A. reading room. The building is heated by steam from the central heating plant and is lighted by electricity.

Rankin Hall of Science

The Walter L. Rankin Hall of Science, erected in 1906, through the munificence of Mr. and Mrs. Ralph Voorhees, is devoted principally to the laboratories and recitation rooms of the departments of Chemistry, Biology, Geology, and Physics. The edifice is three stories in height with a high basement, making practically four stories. It has a south frontage of 132 feet and is 53 feet deep. It is built of Waukesha limestone and so constructed as to be well protected against fire. All of the rooms are well lighted, ventilated, and heated. The departments of Chemistry and Physics occupy the first floor and a portion of the basement. The departments of Biology and Geology occupy the second floor. The third floor contains a large hall for lecture purposes and two halls for literary societies.

Chemical Laboratories

The chemical laboratories are four in number: a laboratory of general chemistry, a laboratory of analytical and organic chemistry, a laboratory for water analysis, and a private laboratory for the instructor in charge. All of these laboratories are located on the first floor of Rankin Hall of Science excepting the laboratory for water analysis, which is located in the basement. Besides these laboratories there are a dark room in the basement for the storage of acids and combustible and volatile chemicals, a general supply and store room on the first floor,

and a balance room. The balance room opens into the laboratory of analytical chemistry, and is well supplied with balances of the best makes.

The equipment of the laboratory of general chemistry is of the most modern and approved construction. It includes reagent shelves, balance shelves, air blast, and individual working desks for sixty students. These desks are provided with drawers, lockers, gas, water, and special ventilating tubes. The ventilation of the laboratory is carefully provided for. Pipes are carried from each desk to a fifty-inch steel plate fan in the basement which is driven by an electric motor and discharges into a special flue. Each desk is furnished with a complete set of apparatus, and the laboratory is well supplied with balances, chemicals, and apparatus for a thorough course in general chemistry.

The laboratory of analytical chemistry is equipped with desks for thirty-six students. It is supplied with reagent shelves, air blast, draft-chamber, and the best apparatus for accurate analytical work. The draft-chamber is connected with the exhaust fan. The laboratory opens into a balance room which contains Sartorius and Becker balances.

The laboratory for water analysis contains desks for twelve students. It is provided with chemicals and apparatus needed for mineral and sanitary water analysis.

The storeroom is well supplied with pure chemicals and apparatus from the best German manufacturers. It is open at stated periods for the purpose of supplying students with apparatus which is needed for special experiments.

A preparation room, equipped with chemicals, minerals, technical products, and lecture apparatus for use in the courses in experimental lectures, opens into the lecture room. The lecture table is supplied with gas, water, the electric current, and a fume chamber connected with the exhaust fan.

Mineralogical Laboratory

The mineralogical laboratory is equipped with several hundred hand specimens of minerals and crystals for work in descriptive mineralogy. The equipment also includes celluloid and wooden models of crystals and goniometers for the study

of crystallography. The necessary apparatus, reagents, and minerals in bulk are provided for blow pipe analysis.

Physical Laboratories

The lecture room and laboratories of the Department of Physics occupy the west end of the first floor, and a portion of the basement, of the Rankin Hall of Science.

The laboratory of general physics is 53 x 24 feet, with a south, west, and north exposure. It is well lighted and is provided with shades of special construction for darkening the room. It contains two large wall cases, which are well supplied with apparatus for use in the study of mechanics, heat, sound, light, and electricity. The laboratory contains an instructor's table and tables for forty students working at one time. These tables are supplied with gas and water, and with electric connections with the large storage battery located in the basement. An office and store room open into this laboratory.

The lecture room opens into the office and store room. It has seats for fifty students and is provided with a lecture table supplied with gas, water, storage battery connections, and direct and alternating current. The room can be darkened at any time, and is provided with a heliostat, stereopticon, and screen. The store room is well supplied with apparatus for class demonstration and illustrated lectures.

In the basement there is a laboratory for advanced work in magnetism and electricity. In addition to a new collection of measuring instruments and a large storage battery there are five dynamos and motors, illustrating both direct and alternating current types of machines. The laboratories are connected with the city electric plant.

Biological Laboratories

The laboratories for biology occupy the greater part of the second floor of Rankin Hall of Science. The laboratory for general biology is a large, well lighted room with desks and lockers for twenty-eight pupils working at one time. There are two microscope cases with lockers for compound microscopes and cupboards for other supplies. Adjoining this laboratory, is a preparation and general supply room, where imbedding and

sectioning may be done. There is an advanced biological laboratory equipped with desks, lockers for eighteen microscopes, and cupboards for other supplies. Just off from this is a darkroom fitted for all kinds of photographic work. It is used also for experiments in plant physiology. A lecture room, accommodating fifty students, is fitted with a stereopticon and screen, and can be darkened at any time.

The equipment of these laboratories includes, in addition to the fixtures already referred to, thirty compound microscopes, dissecting microscopes, microtomes for all kinds of sectioning work, including a Minot automatic rotary microtome of the latest model, a sliding microtome of the latest type, drying ovens, paraffin baths, steam sterilizer, camera lucida, stage and eye-piece micrometers, injecting apparatus, animal cages, collecting cases, gas pressure regulator, thermo-regulators, balances, and a collection of histological slides of different plant and animal tissues. Glass ware, stains, and reagents are provided for microscopical, histological, and general laboratory work. A laboratory for general bacteriology is equipped with standard apparatus of the most approved type. The laboratory for experimental biology is well supplied with instruments for the study of vital phenomena in both animals and plants. Recent additions in this laboratory include anthropometric apparatus for the complete and scientific study of the development, strength, and symmetry of the human body.

This equipment is supplemented by some 2,000 lantern slides, over 4,000 microscope slides, a laboratory camera, a lantern-slide camera, and a set of micrographic and micro-projection lenses, belonging to the instructor in charge of the department.

The museum, which is more fully described elsewhere, contains collections of insects, woods, shells, eggs, stuffed birds, and pressed plants, which are much used for illustration. A Mountjoy Natural History Chart with colored plates of birds and other animals also belongs to the department.

Geological Laboratory

This laboratory occupies the east end of the second floor of Rankin Hall of Science. The equipment includes maps, charts, globes, and rock, mineral, and fossil specimens. Among these

are thirty-five folios of the Geological Atlas of the United States; the Topographical Atlas of the United States; the Geological Atlas of Wisconsin; the Daily Weather Maps; and a collection of fifteen hundred rocks, minerals, and fossils.

A voluntary observer's station in connection with the United States Weather Bureau has been established recently at Carroll College under charge of this department. For this work the government has furnished an instrument shelter, maximum and minimum thermometer, and a rain gauge. These are used for meteorological study.

Museum

The college has acquired, by gifts from friends and by purchase, a considerable quantity of interesting and valuable illustrative material, including the following collections: the Miller case of mounted Wisconsin birds; the Haight collection of birds' eggs; the Park collection of mounted plants and Wisconsin woods; the Quaw collection of shells; numerous Indian relics; mounted vertebrates; placques of mounted insects; and a quantity of geological and paleontological material.

While no attempt has as yet been made to fit up a museum for public display, yet these various collections are extremely useful in connection with the regular work of instruction, and it is hoped that very soon the college may be justified in putting the large museum room on the third floor of Rankin Hall to the use for which it was originally planned. To this end gifts or loans of collections and of all sorts of objects suitable for museum purposes are solicited.

Library

Voorhees Library of Carroll College is supported by an income from the sum of twenty thousand dollars given for the endowment of the library by Mr. and Mrs. Ralph Voorhees of New Jersey, and by special appropriations. The books are carefully selected with special reference to the needs of the several departments. They are catalogued and arranged according to the Dewey system of classification. The collection includes over one thousand bound volumes of leading periodicals which are of

value in reference work through the aid of *Poole's Index* and *Reader's Guide to Periodical Literature.* These files will be completed as soon as possible. The library is well supplied with standard works of reference. Reserve shelves are provided on which are placed books for special readings assigned by the various professors.

The reading-room is a large well lighted room, tastefully decorated, and furnished in mission style. Reading tables are abundantly supplied with daily and weekly papers, current magazines, literary reviews, and scientific journals.

The library is open for reading and study from 8 a. m. to 5 p. m. on recitation days and from 9 to 12 a. m. on Saturdays. Students have free access to the shelves and are permitted to draw books by complying with customary library restrictions. In the preparation of orations and debates the facilities of the library may be supplemented by those of the very complete public library of Milwaukee and of the Carnegie Library of Waukesha, to both of which students have access.

Elizabeth Voorhees Dormitory for Women

This new building is the gift of Mr. and Mrs. Ralph Voorhees, and, at the request of her husband, is named in honor of Mrs. Voorhees. It was planned after a careful study of the most modern dormitories elsewhere, and embodies the best standards of comfort and convenience. Like the other buildings it is of the famous Waukesha limestone. Each floor has spacious halls and is amply supplied with lavatory facilities, and the entire building is heated by steam and lighted by electricity. It is thoroughly up-to-date in all its details, with the appointments of a cultured home. The building has accommodations for eighty girls. Most of the rooms are intended for a single occupant, but some of larger size are designed for two people, and there are a few suites consisting of parlor and two bedrooms.

The dining-room is large and cheery, and will accommodate one hundred and sixty persons. It is practically a college commons; many of the young men take their meals there, a separate entrance and waiting-room being provided. On the first

floor of the dormitory is a large reception room with parlor adjoining, and suites of apartments for the Dean and the Matron.

The domestic department is superintended by a competent, experienced Matron. The Dean of Women presides over the social life, and is responsible for the physical and moral welfare of the young women in the home. The Dean and the Matron are both cultured Christian women who have had long experience in dealing with girls and who respond quickly to all their needs. Everything is done to surround the student with helpful, stimulating influences. There is no unnecessary or annoying surveillance; only such restraints are imposed as are needed to give the atmosphere of a well-ordered home, and to help the young women to exercise self-control and to develop well balanced Christian characters.

Voorhees Cottage

Voorhees Cottage,—like others of the college buildings, the gift of Mr. and Mrs. Ralph Voorhees,—is the residence of the President of the college and is intended as a college home, the center of the life of the college. It is at once beautiful and convenient in all of its arrangements.

Admission

To enter the freshman class of the college, candidates must present a certificate of graduation from an accredited high school, or pass an examination upon the subjects indicated below under the head of Requirements for Admission. Testimonials of good moral standing will be required from those who are not personally known to the authorities of the college.

Registration

Monday and Tuesday of the opening week of the college year are registration days. By special arrangement, registration may be made before these days. For the second semester students must register during the last week of the first semester.

On registration day the student will present himself to the Dean and Registrar of the college, who will receive his certificate or other credentials from the school last attended, and assist him in selecting his course of study for the semester. No assignment to classes shall be made, however, until the student shall have presented to the Dean a matriculation card signed by the acting treasurer of the college and indicating that his tuition for the semester has been provided for. Failure to register at the appointed time will subject the delinquent to a special registration fee of one dollar.

Admission by Certificate

Graduates of accredited schools will, on presentation of a certificate signed by the principal or superintendent, or other authorized officer, be given credit without examination for the work done. Blank forms of application for admission may be secured at any time by addressing the Registrar. They should be filled out and returned by September tenth.

Admission by Examination

Candidates for admission to the freshman class, coming from high schools not accredited, or having credits that are not entirely satisfactory, may have the privilege of proving them-

selves worthy of entrance by taking a written examination. Such examination will be appointed for Monday of registration week.

The courses outlined in the High School Manual of the State of Wisconsin represent in general the character of the work required for admission.

Requirements for Admission

The requirements for admission are based upon a preparatory course of four years, with four subjects each year. A year's work in a subject, with five recitations per week, constitutes a unit. For unconditional admission to the freshman class, candidates must offer a total of fifteen units selected from the list given below, the required units being:

English: two units.
Mathematics: two units.
History: one unit.
Science: one unit.
Foreign Language: two units.

It is considered desirable that at least three units of English be presented.

1 English

Preparation in English should be such as to accomplish two objects: (1) command of correct and clear English; (2) ability to read with accuracy, intelligence, and appreciation. Such preparation should include a thorough course in composition, and careful reading of classics included in the list of College Entrance Requirements in English.

(a) Review of English Grammar. Composition: simple narratives and descriptions. Literature: English classics. 1 unit.

(b) Composition: written work based upon writer's experience and observation, or upon texts read in class. Literature: English classics. 1 unit.

(c) Rhetoric and composition. Literature: English classics. 1 unit.

(d) Composition. Literature: History of English and American literatures. Classics. 1 unit.

2 Greek

(a) White's *First Greek Book;* Xenophon's *Anabasis*, Book I, chapters 1-5. 1 unit.

(b) Xenophon's *Anabasis* to the end of Book IV; Homer's *Iliad*, Books I-III; Prose Composition. 1 unit.

3 German

(a) Bacon's *German Grammar;* Spanhoofd's *Lehrbuch der deutschen Sprache;* Storm's *Immensee;* or equivalent texts. 1 unit.

(b) Bernhardt's German Composition; Freytag's *Die Journalisten;* Goethe's *Egmont* or Schiller's *Wilhelm Tell;* sight reading of easy fiction. 1 unit.

4 French

(a) Grammar, and translation from French into English and from English into French. 1 unit.

(b) Reading of modern French of average difficulty, chosen from nineteenth century literature. This reading should cover about one thousand pages. 1 unit.

5 Latin

(a) Elementary Latin; inflections and constructions. Translations and elementary prose. Outline of Roman History. 1 unit.

(b) Latin Grammar. Caesar's *Commentaries*, four books, or an equivalent. Latin Prose Composition, twenty lessons. 1 unit.

(c) Cicero, five orations and selected letters. Latin Prose Composition completed. 1 unit.

(d) Virgil's *Aeneid*, six books; Mythology. 1 unit.

6 Mathematics

(a) Algebra, through simple quadratic equations. Special attention should be given to the use of symbols of grouping, factoring, fractions, simple linear equations and systems of equations with careful analysis of easy problems solved by them, the solution of the quadratic

equations and problems involving them, and such theorems in surds and imaginaries as are necessary in the treatment of the quadratic. 1 unit.

(b) Plane Geometry as given in Wentworth, or an equivalent text, with original problems. 1 unit.

(c) Solid Geometry, including spherical, with easy original problems. ½ unit.

(d) Algebra. Review of the work of the first year with advanced work in ratio, proportion and variation, the progressions, binomial theorem, the graph and logarithms. ½ unit.

7 Science

(a) Physics. One year's work in elementary physics, such as is covered by the standard elementary text-books. At least one-half of the work should consist of laboratory exercises. The laboratory notebook, approved by the instructor under whom the work was done, should be presented by candidates for admission. 1 unit.

(b) Chemistry. General chemistry, recitations and laboratory work throughout the year. The ground covered should be that of the best chemistry text-books, such as Remsen's Briefer Course. The laboratory notebook, approved by the instructor under whom the work was done, should be presented. 1 unit.

(c) Zoology. One year's study of animal structures, habits and general life history will be accepted, provided that laboratory practice and field work have formed part of the course. Laboratory drawing books must be presented. 1 unit.

(d) Botany. One year's work in structural and systematic botany. Laboratory practice and field work must form an important part of the course. At least 100 hours should be given to laboratory work, besides field work. 1 unit.

(e) Physiography. One year's work. The recitation work should be supplemented by the making and study of maps, and by field work. Tarr's *Elementary Physical*

Geography, or an equivalent text, is suggested. A portion of the course, from one-fourth to one-half, may include Commercial Geography. 1 unit.

(c), (d) and (e) may be presented in half units.

8 History

(a) Ancient History to the year 800 A. D., with special reference to Greek and Roman History. 1 unit.

(b) Mediaeval and Modern History from 800 A. D., to the present time. 1 unit.

(c) A general course in American History or English and American History. 1 unit.

(d) American History and Civics. 1 unit.

Preparatory Instruction

To accommodate students who wish to prepare for college, instruction is offered in the subjects included in the above statement of requirements for admission and in public speaking. While the instruction thus provided may include the greater part of a college preparatory course, students from the public schools are advised to offer preparation for at least third year high school work. Mature persons with practical experience may find opportunity to reduce the time usually given to college preparation.

A diploma will be given to students who shall have met the college admission requirements and who shall have had at least one year of resident study.

Admission to Partial Courses

Those who are not candidates for a degree may, without examination, enter any class for which they may be found fitted, and thus pursue a partial course. If at any time such students should become candidates for a degree it will be necessary for them to satisfy the entrance requirements.

Students entering college with conditions in preparatory work must first arrange to remove such conditions. While re-

moving conditions, students may take such college work as they may be able to carry, but to be considered in regular college standing they must take at least eleven hours of college work.

Admission to Advanced Standing

Students presenting a certificate of honorable dismissal from other colleges and a definite statement of the amount of work done and the credit received for it may be admitted to advanced standing; but the amount of credit given for the work will depend upon the ground covered and the time spent, and is subject to the judgment of the instructors in the several departments. No college credit will be given for work done in secondary schools except on examination.

Relation to the University of Wisconsin

An agreement has been entered into with the University of Wisconsin whereby both institutions have the same entrance requirements and the same list of accredited schools. Students who change from one institution to the other will be given the rank of sophomores or juniors, if the change is made at the end of the first or second year of their work. It is not advisable for students to make a change at the end of the junior year, but where such cases occur they will be dealt with on their individual merits. Students who include in their full course at Carroll the pre-engineering group of studies can enter the engineering department of the University of Wisconsin and complete a technical course in two years. Those who enter before graduation will be given the same credits as students who transfer from the College of Letters and Science of the University to its engineering department.

Student Advisers

At the beginning of the year each student is assigned to a member of the faculty who acts as his adviser, and keeps in touch with his work in all departments. The adviser may be consulted by the student in reference to anything connected with any of the varied interests of a college student's life, and will transmit to the faculty any request of the student concerning his work that requires a vote of the faculty.

Studies and Graduation

Any student who shall have completed the work required for a degree as indicated below and who shall have been in residence at least one year immediately preceding the application for such degree, is eligible to graduation.

Upon the fulfillment of the requirements for graduation and on recommendation of the Faculty, the degree of Bachelor of Arts, or of Bachelor of Science (in Chemistry), is conferred by the Board of Trustees.

Requirements for the Degree of Bachelor of Arts

The college year is divided into two semesters. One hour of recitation or lecture per week, for one semester, is designated a unit hour. Two hours of laboratory work or two hours of prescribed physical exercise in the gymnasium are credited as one unit hour. Students are expected to take thirty-two unit hours per year during the freshman and sophomore years, two of which may be class work in physical exercise. For the degree of Bachelor of Arts a total of 124 unit hours is required, four of which may be of prescribed physical exercise.

No student will be permitted during one semester to receive a credit toward graduation of more than sixteen unit hours in regular studies except by permission of the Faculty, obtained in advance. Students are not allowed to receive credit for more than eighteen unit hours in any one semester.

The 124 unit hours of recitation, lecture, and laboratory work required for graduation include:

(1) Courses required of all candidates for a degree;
(2) Courses in the major subject; and
(3) Elective courses.

1 Required Studies

The following courses are required of all candidates for a degree:

(a) English: six unit hours, to be taken in the first year.

(b) Language: sixteen unit hours for those who offer at least three years of preparation, and twenty-four unit hours for those who offer only two years of preparation.
(c) The Bible: eight unit hours.
(d) Philosophy: six unit hours.
(e) Mathematics: six unit hours.
(f) History: eight unit hours.
(g) Natural Science: ten unit hours, to consist of a one year course in either Biology, Chemistry, or Physics.

2 Major Study and Thesis

Major Study: At the beginning of the sophomore or junior year each student shall select as his major subject the work of some one department in the college. This department will determine the manner in which the work of the major shall be completed. The work required in the major (including thesis and required work) shall not be less than twenty unit hours, nor more than forty unit hours, the credit for the thesis being four hours. Any one of the following subjects may be chosen as a major: Philosophy; History; English; Biology; Mathematics; German; Latin; Chemistry; Physics.

Thesis: Candidates for a baccalaureate degree may be required to present a graduating thesis, the subject of which must be approved by the head of the department in which the candidate is doing the work represented by the thesis. The thesis must represent some phase of the student's work in his major study, and must have the character of a scholarly dissertation on the subject.

3 Electives

All work not included under 1 and 2 is elective, but credit toward graduation shall not be given in one department for more than forty unit hours, including required work, major and electives. Not more than seventy hours credit may be received in the subjects included in any one of the following groups:

I	II	III	IV
English	Biology	History	Psychology
German	Geology	Political Science	Education
Latin	Chemistry	Political Economy	Ethics
French	Mineralogy	Sociology	Philosophy
Greek	Physiology		Logic
	Physics		

Studies of the Freshman Year

At the beginning of the freshman year each student shall elect, in consultation with the Dean, one of the following groups of studies for the year's work:

I		II		III	
English	3	English	3	English	3
Mathematics	4	Mathematics	3	Mathematics	3
German	4	Latin	4	Latin	4
History	4	History	4	Greek	5
Bible	1	Bible	1	Bible	1
IV		**V**		**VI**	
English	3	English	3	English	3
Mathematics	3	Mathematics	3	Mathematics	3
Latin	4	German	4	German	4
German	4	Chemistry	5	Biology	5
Bible	1	Bible	1	Bible	1

(The figures following the names of the subjects indicate the number of unit hours for each semester.)

The Sophomore, Junior, and Senior Years

Each student who chooses his major subject at the beginning of the sophomore year shall outline at that time, in consultation with the head of the department in which he selects his major work, his course of study for the sophomore, junior, and senior years. The course may be changed with the consent of the head of the department and the Dean.

Suggested groups of studies are outlined after the descriptions of the courses in the various departments in which major work is offered.

Requirements for the Degree of Bachelor of Science (in Chemistry)

The requirements for admission to the Course in Chemistry are the same as they are for the courses leading to the degree of Bachelor of Arts, with the exception that elementary physics is required for entrance.

For graduation 132 unit hours of lecture, recitation, and laboratory work are required.

Four units of prescribed work in physical culture may be offered toward graduation.

ELIZABETH VOORHEES DORMITORY

The required subjects are:

Chemistry: including chemical thesis, forty-eight unit hours.

Physics: ten unit hours.

Mathematics: sixteen unit hours.

English: six unit hours.

German: twelve unit hours.

The Bible: eight unit hours.

No student may receive more than fifty-eight unit hours credit in chemistry toward graduation.

A synopsis of the Course in Chemistry may be found on page 37.

Preparation for Professional Courses

By a careful combination of the major system and required studies, Carroll College aims to secure two results for her students: to give the breadth of culture, extent of information, and training of the mental powers needed as a basis for all lines of activity; to provide for each student the opportunity of becoming well acquainted with some field of knowledge that will specially prepare him for any line of professional study that he may intend to pursue. To this end a number of suggested groups of studies have been outlined and placed after the descriptions of courses offered by the various departments.

Teaching

The departments of Education and Philosophy offer a number of courses which are especially adapted to the needs of those who intend to enter the profession of teaching. The student who desires to obtain a thorough preparation for teaching any particular subject should choose that subject as his major study. Special teachers' training courses are offered by the various departments of instruction. These courses, together with the professional courses offered by the dpeartment of Education, form an important part of the groups of studies suggested for those who desire to prepare for teaching. For these groups the student is referred to the descriptions of courses in the various departments.

The school laws of Wisconsin provide that graduates of colleges whose courses of study are fully and fairly equivalent to corresponding courses in the University of Wisconsin may receive an unlimited state certificate upon recommendation of the State Board of Examiners. Acting under this provision the State Board has granted state licenses to the graduates of Carroll College. The teachers' course offered here is carefully planned to include all branches of study required by the state.

Medicine

The departments of Biology and Chemistry offer a number of courses which will be of great value to the student who enters a medical college. The laboratories of these departments are well equipped and the courses offered are designed to give the student a working knowledge of these sciences. By proper coordination of his work here with that of the medical school it is possible for the student to reduce the total number of years required to obtain the degrees of Bachelor of Arts and Doctor of Medicine. Groups of studies which are suited to the needs of the pre-medical students are described in connection with the departments of Biology and Chemistry.

Law

Like other professions, that of the law is today making larger demands of preparation from those who would enter the profession. The better law schools of the country are now requiring a considerable part, or the whole, of the college course for entrance. In the courses offered in history, economics, languages, English, and sociology, will be found excellent preliminary training for the successful study and pursuit of the profession of law. The student may find suggested groups of such studies at the end of the statement of the department of History and Economics on page 64.

Theology

Students who expect to enter the ministry should have, in addition to a knowledge of the Bible, the classics, moral philosophy, psychology, literature, and history, an intelligent under-

standing of the laws of God as manifested in the material universe and as revealed by the study of the fundamental sciences. Courses in theology do not form a part of the college curriculum, but work especially adapted to the student for the ministry is offered in the various departments. Groups of studies adapted to individual needs will be arranged by the head of the department in which the student chooses to do his major work.

Business

The conditions and tendencies in commercial activity today have made of business a profession, and, in large measure, a technical profession, requiring extensive special training. The courses offered in mathematics, history, economics, business law, advertising, commercial geography, modern languages, English, and the sciences may be so combined as to provide excellent and effective preparation for business and industry. Considerable opportunity for practical administrative experience may be found in the conduct of the various student enterprises.

An arrangement has been completed with the Williams Business College of Waukesha, whereby students of Carroll College who so desire may obtain there instruction in stenography, typewriting, and other commercial subjects.

Journalism

While the college offers no organized course in journalism, yet much of the material of such a course is provided in the work in languages, history, economics, business law, sociology, and English. Some opportunity for practical experience is provided in connection with the various college publications. Occasional lectures are given by men of experience in the profession.

Engineering

A young man can acquire by a course in Carroll College much information that is fundamental to all engineering courses, and so materially shorten his professional course, at the same time securing that culture, general information, and mental discipline

which are so essential to men who are to be agents in the betterment of society, no matter in what line of work they may engage.

Students who expect to study engineering should do their major work in mathematics and physics or pursue the course in chemistry. The courses offered in the college include the mathematics, the fundamental sciences, and the modern languages, which form an important part of all engineering courses. More technical courses, especially adapted to the engineering student, are offered in mechanical drawing, descriptive geometry, surveying, industrial chemistry, bacteriology, mineralogy, mechanics, and electrical measurements.

The courses in mathematics, physics, mechanical drawing, descriptive geometry, mechanics, surveying, and chemistry are so arranged as to enable the student of engineering to satisfy, during his freshman and sophomore years the engineering requirements in these subjects of the first two years at the University of Wisconsin. After two years in Carroll College the student may, in two additional years, complete the requirements for an engineering degree. It is recommended, however, that he complete his college course before entering a technical school. He may thereby secure additional training of great value to the engineer in the sciences, in mathematics, and in commercial subjects.

Suggested Course for Engineering Students

FIRST SEMESTER

Freshman.		Sophomore.		Junior.		Senior.	
English	3	Calculus	5	Physics	4	Physics	4
German or French	4	Physics	5	Mathematics	3	Mathematics	3
Mechanical Drawing	3	Surveying	3	Surveying	2	Philosophy	3
Algebra	3	Descriptive Geometry	3	History	4	Elective	
Trigonometry	2	Bible	1	Economics	4	Bible	1
Chemistry	3	German or French	4	Bible	1		
Bible	1						

SECOND SEMESTER

Freshman.		Sophomore.		Junior.		Senior.	
English	3	Calculus	4	Physics	4	Physics	4
German or French	4	Physics	5	Mathematics	3	Mathematics	3
Mechanical Drawing	3	Surveying	3	History	4	Electives	
Analytical Geometry	5	Mechanics	3	Economics	4	Bible	1
Chemistry	3	Bible	1	Philosophy	3		
Bible	1	German or French	4	Bible	1		

Course in Chemistry

The great demand for technical instruction in the college, together with the large opportunities open to the trained chemist in the manufacturing industries, has led to the establishment of a Course in Chemistry. It is the aim of the course to fit students for practical work as chemists in manufacturing establishments or technical laboratories. Executive positions in chemical manufactories are frequently filled by chemists who show marked ability for administrative work. Graduates are fitted to enter upon graduate work in chemistry, to teach chemistry, or to take paid positions as chemists immediately upon graduation.

Suggested Outline of Course in Chemistry

FIRST SEMESTER

Freshman.		Sophomore.		Junior.		Senior.	
Chemistry	5	Chemistry	7	Chemistry	5	Chemistry	5
Mathematics	5	Physics	5	Mathematics	3	Bacteriology	
English	3	German	2	French	4	or Mechanics	5
German	4	Bible	1	Bible	1	Chemical	
Bible	1	Mechanical		Elective		Thesis	2
		Drawing	2			Bible	1
						Elective	

SECOND SEMESTER

Freshman.		Sophomore.		Junior.		Senior.	
Chemistry	5	Chemistry	7	Chemistry	5	Chemistry	5
Mathematics	5	Physics	5	Mathematics	3	Chemical	
English	3	German	2	French	4	Thesis	2
German	4	Bible	1	Bible	1	Bible	1
Bible	1	Mechanical		Elective		Geology	5
		Drawing	2			Elective	

University Scholarship

The faculty of Carroll College is authorized by the University of Wisconsin to appoint each year a member of the graduating class of the college to a graduate scholarship in the university. This scholarship affords the incumbent an income of $225 annually.

Departments of Instruction

The work of the college is organized under the following Departments of Instruction:

Ancient Languages.
Biblical Literature.
Biology.
Chemistry.
Education.
English.
Geology.
History and Economics.
Home Economics.
Library Science.
Mathematics.
Modern Languages.
Music.
Philosophy.
Physics.
Public Speaking and Dramatic Literature.
Sociology.

The following departmental statements represent the work that the college is prepared to offer under proper conditions of need and demand. The greater number of courses offered is given regularly every year. Some of the courses are given in alternate years, and a few at longer intervals. The arrangement is such, however, that a student may obtain during the normal period of college residence any course that he may need or desire.

ANCIENT LANGUAGES

Professor Theiss; Miss Horne

The department of Ancient Languages offers courses in Greek and Latin. The aim is mainly to provide training in the fundamental principles of grammar and to give a working knowledge of vocabulary and idioms; to develop the ability to translate and read Greek and Latin rapidly and intelligently; to awaken and support an interest in the study of private and public antiquities as well as in literary and political history; and to

offer as complete an interpretation of ancient thought and literature as is possible in undergraduate work.

Greek

11 Elementary Greek

Grammar and Reader. Stress is placed upon the mastery of inflections, sentence constructions, and idiomatic usage, by constant oral drill and written exercises. Xenophon's *Anabasis*, with rapid collateral reading of the Greek Testament.

First and second semesters. Four hours.

12 Greek History

A thorough study of Xenophon, Thucydides, Herodotus, with selections from Diodorus Siculus, Plutarch, Arrian, and Lucian.

First and second semesters. Four hours.

13 Greek Oratory

A study of the style, method and matter of orations of Lysias, Isocrates, Isæus, Demosthenes, and Aeschines, with reference to Greek courts and jurisprudence.

First semester. Three hours.

14 Greek Poetry

A study of Homer and Hesiod, with selections from Anacreon and Pindar, and from Aeschylus, Sophocles, Euripides, and Aristophanes, with reference to poetic forms, Greek religion, and dramatic conceptions.

Second semester. Three hours.

15 Greek Science

This course involves a careful reading of extracts from, and interpretations of, the teachings of Thales and Anaximander, of Xenophanes and Parmenides, of Heraclitus, and of Pythagoras and Democritus, with special reference to modern scientific theories.

First semester. Three hours.

16 Greek Philosophy

This course presents a study and discussion of the teachings of Socrates, Plato, and Aristotle, with reference to philosophic technology and modern systems of philosophy.

Second semester. Three hours.

Latin

10a Beginning Latin

This course is open to all college students who have not had Latin in high school. A thorough study of Latin grammar is followed by a reading of selections from various authors, including the first two books of Caesar's *Gallic War.*

First and second semesters. Five hours.

10 Cicero and Virgil

Six orations of Cicero and six books of Virgil's *Aeneid* read. Prose composition is required during the second semester. This course, or its equivalent, is prerequisite for course 11, and is provided for those students who enter with only two years of Latin.

First and second semesters. Four hours.

11 Livy, Tacitus, Cicero, and Ovid

Livy: selections from Books 21 and 22. Special points of emphasis: grammatical construction, the growth of Roman institutions, and the period of Punic wars.

Tacitus: *Germania* and *Agricola.*

Cicero: *De Senectute* and *De Amicitia.*

Careful tracing of all historical allusions.

Outline of Roman philosophy.

Ovid: selections from the *Metamorphoses.*

Latin prose composition.

First and second semesters. Four hours.

12 Horace, Tacitus, and Plautus

Horace: the *Odes* and *Carmen Saeculare.*
Tacitus: selections from the *Annals.*
Plautus: two plays.
Prose composition and sight translation.
First and second semesters. Three hours.

13 Seneca and Lucretius

Seneca: three tragedies.
Lucretius: *De Rerum Natura,* Book I.
Advanced prose composition, sight translation.
First semester. Three hours.

14 Lucretius and Juvenal

Lucretius: *De Rerum Natura,* Books III and V.
Juvenal: selections from the *Satires.*
Advanced prose composition, sight translation.
Second semester. Three hours.

15 Catullus and Martial

Catullus: selection from the *Odes.* Special attention is given to meters.

Martial: selections from the *Epigrams.* (Completed in the second semester.)

First semester. Three hours.

16 Teachers' Course

Latin grammar is especially emphasized. The authors usually read in high schools are reviewed. Lectures are given in which methods of teaching Latin are discussed. Practice teaching is required, and is carried on in connection with Education 17.

Second semester. Three hours.

17 Roman Correspondence.

Selected Letters of Cicero and Pliny the Younger.
First semester. Three hours. Alternates with course 15.

18 Roman Comedy

Selected plays of Plautus and Terence.

Second semester. Three hours. Alternates with Juvenal of course 14.

19 Latin Prose

Advanced composition for seniors.

First semester. One hour.

20 Latin Literature

Lectures and text-book study. For seniors.

Second semester. One hour.

Suggested Groups with Major in Latin

1		2		3	
Latin	20	Latin	20	Latin	20
German	16	Greek	20	History	16
French	8	French	8	French	8
English	12	English	6	English	6
Philosophy	15	Philosophy	15	German	16
History	8	History	8	Philosophy	15
Mathematics	6	Mathematics	6	Mathematics	6
Science	10	Science	10	Science	10
Bible	8	Bible	8	Bible	8
Electives	19	Electives	21	Electives	21
	124		124		124

BIBLICAL LITERATURE

PRESIDENT CARRIER; MRS. CARRIER

The English Bible is made a text-book in the college, and the aim of this department is to familiarize the students with the Scriptures, and to give them a good general knowledge of the history and teachings of the Bible. The courses are so arranged that in four years the whole Bible may be covered. Many portions of the Old and New Testaments are studied carefully, while those of seemingly less importance are passed over hurriedly. Students are encouraged to ask questions, and difficult problems are freely discussed with the purpose of encouraging more independent thought and a firmer faith. Thorough and

careful study is required and credit given toward graduation. Bible truth, and not denominationalism, is the subject of study. The American Standard Revision is the text used for class-room work.

11 The Life of Christ

The life of our Lord is so presented as to help the student to a clear and intellectual conception of Jesus as He is portrayed in the Gospels. The contents of the four Gospels are carefully studied.

First semester. One hour.

12 Apostolic History

This is a study of the external and internal growth of the Christian Church as it is portrayed in the Acts of the Apostles. The Bible is used as the text-book.

Second Semester. One hour.

13 The Books of the Pentateuch

First and second semesters. One hour.

14 The Pauline Epistles

Four or five of the principal epistles of Paul are studied. The date, occasion, and purpose of writing are discussed.

First semester. One hour.

15 Catholic Epistles and Revelation

Second semester. One hour.

16 Historical Books of the Old Testament

A general survey of the history of the Hebrew people from Joshua to Nehemiah.

First semester. One hour.

17 Old Testament Prophecy

Several prophetic books are taken up in detail in their chronological sequence. Particular attention is paid to the historic setting of these prophecies, their vital relation to the life of those to whom they were addressed, and the elements of moral and spiritual truth which they convey.

Second semester. One hour.

BIOLOGY

Professor Plowman; Mr. Parmenter; Mr. Raue; Mr. Phillips

Biology has been defined as "that science which attempts to answer every reasonable question about living things." The very great importance and practical value of this science are quite self-evident. A well-rounded education must include a knowledge of at least the fundamental principles and laws of Life. Ignorance as to the structure and functioning of living organisms, particularly of his own body, will discount very materially the worth of all other knowledge that a college graduate may have acquired.

After the general course of the freshman year, the work of this department naturally diverges along the two lines of phytology and zoology. The phytological line leads to the special fields of bacteriology, sanitation, agriculture, forestry, etc. The zoological line leads to animal anatomy, physiology, hygiene, surgery and medicine. It should not be inferred from this that the work of this department is technical and highly specialized. On the contrary, no hard and fast boundaries are recognized as limiting the student of biology, but rather is he encouraged to follow out to its ultimate answer every reasonable question pertaining to the problem of life. A knowledge of at least the rudiments of Greek will be of great practical value in this work.

The department is well housed in convenient and well-lighted rooms on the second floor of Rankin Hall. The equipment is modern, and ample for the work offered. See the description of laboratories on page 19.

Major work in this department must include at least thirty units, of which courses 11, 12 or 14, and 22 should always form a part. The advanced work may take either the phytological or the zoological trend.

11 General Biology

It is the purpose of this course to lay a broad foundation for more advanced work in the department, and at the same time to supply a well-rounded body of useful information to those students who may not choose to carry their studies farther in this line. In order to accomplish this double purpose, the work begins with the consideration of the lowest types of living things, and progresses in systematic order to the higher forms. Animals and plants are studied in parallel groups throughout the year; thus are emphasized the essential unity and the progressive divergence of the two kingdoms of life forms. The greater part of the time in this course is devoted to the study of non-flowering plants and invertebrate animals, though the higher forms are studied sufficiently to make clear their essential characteristics and their relation to the lower groups. This work consists of three lectures and four hours of laboratory work each week, reports on reference reading, and occasional field trips. The lectures are based on the texts of Parker and Haswell, Strasburger, Warming, and others. No previous training in biology is required. Biology taken in high school or academy will not be counted as the equivalent of this course, or any part of it.

A deposit of $2.50, to cover possible loss or breakage of instruments, all of which are supplied by the department, is required of each student in this course. The special notebook for the course, including chart outlines, complete outline of the Biosphere, and all necessary paper, is furnished at a cost of one dollar. Semester fee, $3.00.

First and second semesters. Ten hours.

12 Anatomy, Histology, and Physiology of Vertebrates

This work is specifically planned to meet the demand for a pre-medical course along rather broad zoological lines. The comparative anatomy of vertebrate animals is presented in such

a way as to afford a comprehensive foundation for the accompanying study of physiology. For a similar purpose the subject of animal histology is treated in a general way.

As a basis for the lectures, reference reading, and laboratory work of the course, free use is made of such standard texts as those of Gray, Flint, Klein, Dahlgren, and others.

Each student is expected to provide himself with a copy of Flint's *Handbook of Physiology* and a copy of Gould's *Pocket Medical Dictionary*, or its equivalent. While the course is particularly well adapted to meet the requirements of prospective students of medicine, yet it is presented in a manner not unduly technical, and it should prove to be of great value to prospective teachers and others not preparing for the medical profession. Previous training in biological lines, though not imperatively required, is extremely helpful as a preparation for this course. Semester fee, $2.00.

First and second semesters. Ten hours. Given in 1915-16, and alternate years.

13 Anatomy, Physiology, and Oecology of Vascular Plants

This course is a more advanced consideration of the structure, functions, uses, and relationships of vascular plants. The agricultural and economic phases of the subject are made prominent. Large numbers of photomicrographic and other lantern slides, and an extensive collection of microscope slides and preserved materials, are available for this work. The course is based upon the works of Strasburger, Vines, Detmer-Moor, Clements, and many others. Either preparatory biology or Biology 11 will serve as an introduction to this course. Two lectures and three hours of laboratory work each week, with extensive collateral reading and a considerable amount of field work. Semester fee, $2.00.

First and second semesters. Six hours. Given in 1914-15, and alternate years.

14-3 Human Anatomy, Physiology, and Hygiene

A somewhat briefer and less technical course than course 12, omitting the greater part of the comparative anatomy and histology of that course and placing rather more emphasis upon

the subject of hygiene. The work is based upon the texts of Brubaker, Halliburton, and similar standards, in connection with a considerable amount of laboratory and demonstration work. Students are urged to make practical personal application of the laws, principles and practices of physiology and hygiene. Especially in the second semester, the class work gives place to seminars, allowing the fullest possible freedom for the discussion of vital questions. This course is open only to young women. Previous training in biology is desirable, though not actually required. Semester fee, $1.00.

First and second semesters. Six hours. Given in 1914-15, and alternate years.

14-5 The Physiology of Exercise

A practical laboratory study of comparative anatomy and of the theory of physical exercise. A two-hour period each week is devoted to the study and practice of gymnasium exercises, while another two-hour period is given to the study of the comparative anatomy of vertebrate animals. Each student is accurately measured and tested, and is given her complete record and symmetry curve, together with directions for corrective exercises, where these seem desirable.

This work may be taken only in connection with and supplementary to the preceding course, 14-3. Semester fee, $1.50.

First and second semesters. Four hours. Given in 1914-15, and alternate years.

15 Experimental Biology

A course in practical physiological experimentation, including a study of both animal and plant reactions. Fifty experimental studies are outlined, and the student is required to do extensive reading on each topic, work out the details of the experiment, and submit a report with complete kymographic and other mechanical records.

A credit of ten hours is given for the entire course, and any part of the course is credited according to the amount and grade of the work done. The fee for the entire course is $10.00, and pro rata for parts of the course.

As prerequisites for this work, the student should have taken Biology 11 and either Biology 12 or Biology 14, and Physics 11. In any case, students should confer with the instructor before electing this study. Hours are arranged to suit the requirements of the student.

16 General Embryology and Ontogeny

A rapid review of the processes of reproduction and development throughout the vegetable kingdom and lower groups of animals, followed by a more complete study of the embryology of vertebrate animals. Illustrated lectures, reference reading, and laboratory work. The lectures treat quite fully of such topics as heredity, the principles of breeding, and eugenics. The greater part of the time in the laboratory is devoted to a study of the development of the chick. This course should be preceded by preparatory biology or Biology 11. Three lectures and five hours of laboratory work per week. Fee, $4.00.

Second semester. Five hours. Given in 1914-15, and alternate years.

17 Biological Technique

A practical consideration of the approved methods of collection and preservation of biological materials, and of their preparation for laboratory use; microtome technique; manipulation of the microscope; technical photography and the making of lantern slides. Lectures and laboratory practice. Fee, $2.50.

Second semester. Two hours.

18 Conservation of Natural Resources

A popular presentation of a subject which is rapidly forcing itself upon the attention of statesmen and political economists. This may be considered as primarily a liberal culture course, and it is especially recommended to students who are not particularly interested in biological and geological subjects. Illustrated lectures and a limited amount of reference reading. Open to all college students. Fee, $1.00.

First semester. Two hours. Given in 1915-16, and alternate years.

19 Economic Botany

A somewhat detailed study of the structure and biological relationships of the principal plants of commercial importance; such as those supplying food, clothing, drugs, timber, etc. Special attention is given to the microscopical study of woods, and to the detection of adulterations and impurities in foods. This course is planned for the general student of biology, as well as for the prospective physician and food analyst. Previous training equivalent to Biology 11 is desirable. Two lectures and four hours of laboratory work per week. Semester fee, $2.00.

First and second semesters. Eight hours. Given in 1915-16, and alternate years.

20 Bacteriology and General Pathology

The instruction in this course aims only to introduce the student to this vast and increasingly important field. A brief survey of the history of bacteriology is followed by a careful study of the general technique, together with practice in the sterilization of apparatus, preparation of media, and the cultivation and examination of a few common bacterial forms. Special attention is given to the economic and hygienic importance of bacteria, and to their rôle in disease, both of plants and of animals. This course is of fundamental importance in both of the professional trends of biology, and hardly less valuable as a liberal culture study, while to the teacher of biology it is a practical necessity. Biology 11 should precede this course. Two or three lectures and six hours of laboratory work per week. Fee, $2.50; deposit, $5.00.

First semester. Five hours. Given in 1914-15, and alternate years.

21 Organic Evolution

A somewhat critical study of the great doctrine of Organic Evolution, together with a rapid survey of its history from Aristotle to the present. This is followed by a general inquiry into the bearing of this subject upon other fields of thought. This is primarily a liberal culture course, and it is especially recommended to prospective teachers and ministers, as well as

to all students interested in biology. An attempt is made to clear up some of the more common and harmful erroneous impressions so generally current in relation to this subject. Copiously illustrated lectures, reference reading, and class discussions. Either preparatory biology or Biology 11 should precede this course. Fee. $1.00.

Second semester. Two hours. Given in 1914-15, and alternate years.

22 Thesis Course

Students who choose their major work in the department of Biology will be required to submit a thesis, based upon original work of scientific merit, in either phytology or zoology. Unusually excellent opportunities are offered for work in comparative anatomy of plants, plant and animal histology, and laboratory methods in animal physiology. Ample facilities are provided for this work, in the way of equipment and standard works of reference. The special topic for this course must be selected at least one year prior to graduation, and the candidate should have had at least as much previous training in biology as is represented by courses 11, 12 or 14, and 17. Fee, $5.00.

Credit is given according to the amount and quality of work done. A thesis must represent the work of at least four unit hours. The course, as a whole, should represent not less than five, nor more than ten, hours.

23 Household Bacteriology and Hygiene

A brief survey of the history and principles of bacteriology, with special application to the problems of domestic science. Laboratory exercises in the sterilization of utensils, the preparation of culture media, and the cultivation and microscopical study of bacteria, yeasts and molds. Nutritional physiology, and the microscopical study of the principal food materials. Hygiene and sanitation. The nature and prevention of disease. Care of the sick and injured. Semester fee, $2.00.

First and second semesters. Six hours. Given in 1915-16, and alternate years.

Suggested Groups with Major in Biology

1		2		3		4	
Biology 11, 13, 16, 18, 20, 21, 22,	35	Biology 11, 12, 16, 20, 21, 22,	37	Biology 11, 12, 13, 17, 20, 21, 22,	40	Biology 11, 14, 18, 21, 22, 23,	31
Geology	6	Chemistry	20	Physics	10	English	10
Mathematics	6	Mathematics	6	Mathematics	6	History	8
English	6	English	6	English	10	Bible	8
Philosophy	6	Philosophy	6	Philosophy	12	Mathematics	6
German	14	German	13	German	10	Philosophy	12
Greek	10	Greek	10	Greek	10	German	12
Chemistry	15	Bible	8	Chemistry	10	Greek	10
Physics	10	History	8	Bible	8	Chemistry	10
Bible	8	Physics	10	History	8	Physics	10
History	8					Electives	7
	124		124		124		124

Students who wish to fit themselves for special work in agricultural lines will find group 1 well adapted to their needs. Group 2 is planned for pre-medical students, group 3 for prospective teachers of biology, and group 4 is intended especially for young women who may wish to do their major work in this department.

CHEMISTRY

PROFESSOR KEMMERER; MR. JONES; MR. WINCHESTER

The courses in chemistry are designed to meet the needs of three classes of students: those who wish to gain an elementary knowledge of the subject as a part of a general culture course; those who intend to study medicine or to pursue some technical application of science; those who intend to take up chemistry as a profession and so desire a broad foundation for advanced study. The subject matter of chemistry is of fundamental importance in everyday life, and consequently forms an important part of a liberal education. For students intending to study medicine or engineering, a good knowledge of chemistry is necessary. Such students may well do major work in chemistry. Satisfactory completion of the courses outlined below will enable the graduate to enter universities or technical schools as a candidate for advanced degrees; to take up remunerative work as a technical or analytical chemist; or to engage in teaching chemistry. The requirements for a major in chemistry are, in addition to the thesis, thirty unit hours as a minimum. Courses 11, 12 and 13 are required of all who do major work in chem-

istry. Course 11 should be taken in the freshman year. Students who enter course 11 are expected to present credit for one year's work in elementary physics.

In the courses in chemistry especial emphasis is placed upon the experimental side of the science. Students are encouraged to learn facts by experiment, to verify the statements of the text, and to become investigators from the beginning.

11 General Chemistry

This course is made up of experimental lectures together with recitations and laboratory work on the chemical elements, their compounds, and the laws underlying chemical action. In the first semester the work consists of the chemistry of the non-metals, while the second semester is devoted to metals and qualitative analysis. Accuracy, neatness, and honesty in the laboratory work are insisted upon.

First and second semesters. Three recitations, one quiz, and six hours of laboratory work per week. Ten unit hours.

11a General Chemistry for Engineers

This course includes the same class-room work as course 11.

First and second semesters. Three hours of laboratory work per week. Six unit hours.

12 Advanced Qualitative Analysis

Analysis of complex substances and of compounds containing rare elements. Prerequisite: course 11.

Laboratory work, accompanied by two recitations per week. Credit to depend upon work completed.

13 Elementary Quantitative Analysis

A laboratory course involving the general methods of gravimetric and volumetric analysis, and the preparation of pure salts. Each student determines gravimetrically a number of typical elements in pure salts, alloys and minerals. The latter part of the course is devoted to volumetric analysis. The deter-

minations are carefully selected and are designed to give the student a wide range of typical methods of quantitative manipulation. A careful study is made of acidimetry and alkalimetry and the oxidation, reduction, and precipitation methods of quantitative analysis. Much attention is also given to problems in stoichiometry. Prerequisite: course 11.

First semester. Two recitations and twelve hours of laboratory work. Five unit hours.

14 Quantitative Analysis

This course is intended to give a more comprehensive knowledge of quantitative methods than can be obtained in an elementary course. The work consists in the analysis of alloys, minerals, rocks, cement, fuel, iron and steel, gas, and other technical products. The laboratory work is varied to meet the needs of individual students. Texts: Treadwell-Hall, Sutton, Fresenius. Prerequisite: Course 13.

Second semester. Credit in proportion to amount of work completed.

15 Proximate Organic Analysis

Sanitary and mineral analysis of water; soil analysis; food analysis; analysis of soaps, oils, paints, dairy products, fertilizers, and other technical products. The laboratory work is varied to meet individual needs. Prerequisite: course 13.

Second semester. Two lectures and twelve hours of laboratory work. Credit in proportion to work completed.

16 Organic Chemistry

Systematic study of the aliphatic and aromatic compounds of carbon. Recitations and lectures with regular written reviews. Laboratory work in preparing representative compounds of the important series of organic compounds and their identification.

First and second semesters. Two recitations, one quiz, and six hours of laboratory work. Six unit hours. Given in 1914-15, and alternate years.

17 Theoretical and Physical Chemistry

Lectures, recitations, laboratory work, and collateral reading. The lectures give an elementary but systematic view of the subject of physical chemistry. The following subjects are studied in the class-room and laboratory: atomic and molecular weight determination, the periodic law, chemical dynamics, speed of reaction and mass relations, specific gravity determinations, melting and boiling points, solubility, Faraday's law, gas laws, electrical conductivity, phase rule, specific heat, calorimetry, spectrum analysis, and photo-chemistry. Prerequisites: courses 12 and 13, and elementary physics. This course follows course 16, and with course 20 constitutes a year's work, which alternates with course 16.

First semester. Three lectures or recitations and six hours of laboratory work. Five unit hours. Given in 1915-16, and alternate years.

18 Research Work and Thesis

Students who make chemistry their major study or who are candidates for the degree of Bachelor of Science in Chemistry, are expected to select some line of work for careful investigation. The results of the research are presented in the form of a thesis, which must conform to the requirements given on page 31. The line of work selected in course 15 should be correlated with the subject chosen for a thesis.

Credit is given according to the amount and quality of work done. A thesis must represent the work of at least four unit hours.

19 Teachers' Course

This course consists of reports upon assigned topics, and recitations, conferences, and discussions of problems pertaining to the teaching of chemistry. It is pursued in connection with course 17, department of Education. Prerequisite: courses 11, 12, 13.

Second semester. Credit in proportion to the amount of work completed.

20 Industrial Chemistry and Metallurgy

Lectures and recitations: the chemical industries; raw materials; machinery and appliances; methods of manufacture; products, such as glass, porcelain, caustic soda, sodium carbonate, sulphur dioxide, sulphuric acid, the cyanides, gas and coke, mineral and vegetable oils, alcohol, pigments, dyes, cement, fertilizers, paper, and metals. A survey of the applications of chemistry to manufacturing industries. During the course the students make a number of trips of inspection to important manufacturing plants in Chicago and Milwaukee, and vicinity. These trips are personally conducted by the head of the department, and form an important part of the work of the course. Text: Rogers and Aubert. Prerequisite: course 11. It is recommended that students carry this course in connection with courses 12 and 13.

Second semester. Four unit hours. Given in 1915-16, and alternate years.

21 History of Chemistry

This course is conducted as a seminar and aims at a systematic development of the historical side of the subject. Each student is expected to make reports upon assigned topics and to enter freely into discussions concerning chemical theories of the past and of the present. The course is open to juniors and seniors.

First and second semesters. Two unit hours. Given in 1915-16, and alternate years.

22 Food Analysis

Laboratory and lecture instruction upon: the nutritive value of foods; the detection of adulterations and preservatives; analysis of plant and animal foods; fresh and preserved foods; spices, condiments, drugs, and similar products. On account of recent state and national legislation, the subject of food analysis is of great interest and importance. This course is offered to

meet the needs of those students who desire a more complete knowledge of the subject than is possible from course 15. The student is expected to select certain lines of work which will prepare him for the responsible position of food chemist. Prerequisite: course 15.

Credit according to amount and thoroughness of the work.

23 Physiological Chemistry

A study of the foods, of digestion, of the fluids and tissues of the body, and of the urine both in health and in disease. This course is designed especially for medical students, but it is open to all who have completed course 16.

Two lectures; eight hours laboratory work. Four unit hours.

24 Technical Gas, Fuel, and Oil Analysis

Laboratory instruction in gas calorimetry and technical analysis of fuels, illuminating and fuel gases, oils, and products of combustion. Prerequisite: courses 11 and 13.

Credit in proportion to work completed.

25 Inorganic Preparations

A laboratory course in the preparation of typical inorganic compounds and elements. Special stress is laid on manipulation, and purity of the product and yield.

Credit in proportion to work completed.

Suggested Groups with Major in Chemistry

1		2		3	
Chemistry	30	Chemistry	35	Chemistry	30
Biology	10	Physics	14	Mathematics	14
Histology	5	Education and Philosophy	10	Physics	14
Bacteriology	5	Physiology	5	Philosophy	6
Physics	10	Mathematics	6	Political Economy	8
Mathematics	8	English	6	History	8
English	6	German	16	English	6
German	16	French	8	German	16
French	8	Bible	8	French	8
Thesis	4	History	8	Bible	8
Bible	8	Thesis	4	Thesis	4
Philosophy	6	Electives	4	Electives	2
History	8				
	124		124		124

Students who expect to pursue chemistry as a profession should take the Course in Chemistry. This is well adapted to the needs of the sanitary, mining, or chemical engineer. Courses 11, 12, 13, 14, 15, 16, 17, 18, and 20 are required of all students who are candidates for the degree of Bachelor of Science in Chemistry. Additional courses may be elected. A detailed outline of the Course in Chemistry is given on page 37.

Courses 19, 21, 22, 23, and 24 are offered only upon sufficient demand.

Group 1 will meet the needs of those who expect to study medicine. In order to secure the maximum value from a medical course the student should have a good knowledge of analytical and organic chemistry before entering a medical school. Courses 11, 12, 13, 16, 23, and 24 are intended to meet the needs of such students.

Group 2 is recommended for students who expect to teach chemistry, or chemistry and physics.

Group 3 provides an excellent preparation for students who expect to do graduate work in chemistry.

The groups are subject to such alteration as the needs of those pursuing the work may indicate.

EDUCATION

PROFESSOR RAY

The work in education is designed primarily to meet the needs of those students who are preparing to become teachers in the high schools, or superintendents of schools, in the state. To this end the work is closely related to the courses offered in the other departments of the college. For those students who elect their major in philosophy and education, the preparatory classes offer especial opportunities for observation and practice in teaching under competent supervision and criticism. The courses in education are also open to those who may desire the work for general culture and discipline. The work aims to give, on the one side, a knowledge of the development of the child and of the systems and philosophy of education; on the other, a training in the principles underlying the subject matter of education.

11 Psychology

A study of the general field of psychology from the biological point of view. Recitations, lectures, experiments and demonstrations.

First semester. Three hours.

16 History of Education

Education viewed as a process of conscious adjustment. A study of the typical culture periods as revealed by educational ideals, processes, and institutions.

First semester. Three hours.

17 Principles of Education

The meaning of education considered from the standpoint of: (1) biology, (2) psychology, (3) neurology, (4) anthropology, and (5) sociology. Mental development as affected by heredity and environment. Education as affecting the physical, mental, moral, and religious development of the child and the race. The varying educational aims, varying means, and educational values. The relations of the foregoing to the course of study are emphasized.

Second semester. Three hours.

18 Modern Educational Systems

A comparison of the educational systems of Germany, France, England, and the United States is made, with a study of the historical setting of each. The differences in economic, social, political, and religious conditions as affecting education are traced.

First semester. Two hours.

19 Mental Development and Child Study

The work covers: (1) the theory of development; (2) the general characteristics of development; (3) motor development; and (4) hygiene of development with special reference to elementary education.

First semester. Three hours.

20 School Management and Secondary School Problems

In this course an attempt is made to analyze the school as an institution and to show the function and relative importance of the various elements of its structure. Problems are anticipated and solutions suggested and discussed. Special attention is given to the relation of the intellectual and emotional development of the period of adolescence to the high school curriculum.

One semester. Three hours.

21 Practice Teaching

In addition to the completion of at least twelve semester hours selected from the courses under Education, each prospective teacher is required to do practice teaching in preparatory classes. This work is carried on under the direction of the head of the department in which the teaching is being done and under the general supervision of the department of Education.

ENGLISH

PROFESSOR STARR; MISS HORNE

In the courses offered by the department of English three objects are contemplated:

(1) A knowledge of the origin and development of the English language.

(2) An acquaintance with English and American literature.

(3) Proficiency in expression.

(1) The language is treated as a vital growth, a living organism, presenting successive stages of development corresponding to the successive stages in the development of the race. (2) The literature is presented as the reflection of the life of the nation, the artistic expression of the intellectual and spiritual forces that have entered into the formation of the national character and institutions. (3) The masterpieces of prose and poetry are so presented as to lead to an apprehension of correct principles of expression and style, and, by the application of these, to the development of the power of clear and effective ex-

pression. In general, the study of literature forms a part of the courses in composition, and practice in composition, a part of the courses in literature. Of the courses offered below, 11 and 13 are fundamental, and are intended to lay a foundation for the more advanced elective courses. In any year the particular courses to be given will be determined by the needs of the students desiring to elect work in the department.

11 Rhetoric and Composition

A study of the forms of discourse; the preparation and criticism of written compositions; and prescribed readings in English and American prose, as embodying principles of effective expression. The object in all the work is to present just critical standards, to cultivate the sense of literary form, and to develop the power of clear and correct expression. In addition, some time is given to the history of the English language; to the study of words, their etymologies and meanings; and to the subject of bibliography and reference work in the library of the college under the direction of the librarian.

First and second semesters. Three hours.

12 English Prose

A study of the principles of expression based upon the work of the best prose writers, English and American. This course is designed to enlarge the student's acquaintance with the masterpieces of prose literature, to bring him into contact with the finer elements of style, and to promote the development and application of correct standards of criticism and expression. Current and periodical literature is used as a part of the material of this course.

First and second semesters. Two or three hours.

12a Advanced Composition

A course following English 11 and alternating with English 12, intended to develop further the practice of careful research and the power of clear and accurate presentation. It involves extensive reading of the best English and American prose and

leads to a variety of exercises, such as abstracts, reports, technical and historical papers, criticisms, personal essays, etc. The work of the course is related to the practical problems of expression and especially to the interest and need of those inclined toward journalism as a profession. As in English 12, much of the material of the course is taken from the best current and periodical literature.

First and second semesters. Two or three hours.

13 History of English Literature

A survey of the development of the English language and of the history of English literature, with study of individual authors and representative works. Moody and Lovett's *History of English Literature* and *The Century Readings in English Literature*, or equivalent texts, form the basis of the work. Collateral reading and individual reports on assigned topics are required. The relation of the literature to the history of the country is emphasized throughout.

First and second semesters. Three hours.

14a Old English

Anglo-Saxon grammar and reader. Selections from old English prose and poetry. The history of the English language, and the beginnings of English culture.

First semester. Three hours.

14b Middle English

A continuation of course 14a. This course is devoted to the literature of the fourteenth century, with special attention to the works of Chaucer and Langland, the metrical romances, and the beginning of the drama. It includes the reading of Langland's *Piers Plowman*, Chaucer's *Canterbury Tales*, and some of the metrical romances of the time.

Second semester. Three hours.

15 American Literature

A study of American literature, both prose and poetry, with special emphasis upon its relation to American life and thought,

and to contemporary English literature. Consideration of American periodical literature, including the newspaper, forms a part of this course.

First and second semesters. Three hours.

16 English and American Essayists

A study of the development of the Essay as a definite literary form, with reading of the works of the principal essayists, especially of recent and contemporary writers, and attention to the development of English prose style and to literary criticism. Lectures and individual reports upon subjects assigned in connection with the work.

First and second semesters. Three hours.

17 Poetry of the Nineteenth Century

Reading of the poetry of England and America, with lectures and reports on individual topics. A study of the principles of poetics.

First and second semesters. Three hours.

18 The Novel

A survey of the development of narrative literature, with special reference to the modern novel and the short story. Extensive reading and analysis of selected works.

First and second semesters. Three hours.

19 Contemporary Literature

Reading, lectures, and reports in connection with the most important works in the literature of the day, including the magazines and other forms of periodical literature. This course may be given in combination with other courses.

First and second semesters. One or two hours.

20 Teachers' Course

A study of the works required for the college entrance examinations in English. Lectures, papers and class-room discussions, and practice teaching. To be taken with Education 17.

21 Nineteenth Century Literature

This course combining portions of courses 16, 17, and 18, is occasionally given. It covers, in rapid survey, the main currents of nineteenth century life and thought and their expression in literary form.

First and second semesters. Three hours.

For courses in Shakespeare and the Drama, see department of Dramatic Literature, page 92.

Suggested Groups with Major in English

1		2		3		4	
English	28	English	28	English	24	English	24
Dramatic Literature	6	German	16	History	16	Latin or French	16
French or Latin	16	French or Latin	8	Economics	8	German	16
German	16	History	16	German	16	History	8
Philosophy	15	Philosophy	6	Mathematics	6	Mathematics	6
History	8	Mathematics	6	Philosophy	15	Philosophy	15
Mathematics	6	Science	10	Science	10	Science	10
Science	10	Economics	8	Bible	8	Bible	8
Bible	8	Bible	8	Electives	25	Electives	21
Electives	11	Electives	18				
	124		124		124		124

Group 1 is planned for students who are preparing to teach English, group 2, for those who expect to enter journalism or the law, and groups 3 and 4, for those intending to teach English in connection with another subject.

GEOLOGY

PROFESSOR PLOWMAN

At present only a limited amount of work is offered in this department. The subject is considered primarily in its basic relation to the biological sciences. While no attempt is made to enter to any considerable extent upon the consideration of the more specific and technical phases of this science, yet the course aims to serve as an adequate introduction to this department of knowledge. Accordingly, only essential facts and well-established theories are considered, and breadth of view, rather

than matters of detail, is the purpose of the course. In addition to its fundamental bearing upon biological problems, the work of this department should be of great value to those who may engage in the teaching of geography and physiography.

11 General Geology and Physiography

This course consists of a brief general survey of the subject of earth forms, physiography, structural, dynamic, and economic geology, and the chief facts of paleontology. The work of the course includes recitations from a text-book, illustrated lectures, reports on assigned reading, section-drawing from geological maps, and laboratory and field study of typical rocks, soils and physiographic forms. Open to all college students. Especially valuable to engineering students and prospective teachers of geography, physiography, and biology. Semester fee, $1.00.

First and second semesters. Six hours. Offered in 1914-15, and alternate years.

HISTORY AND ECONOMICS

Professor Ganfield; Miss Nichols

History

The study of history in a wide sense includes all departments of social life, political, economic, religious, and others. The state is, however, one of the most important features of social development; the study of political life is of very great value to citizens of a republic. While in the following courses, special attention will be given to political history, the aim will be also to acquaint the student carefully with social customs and conditions, industrial pursuits, and religious institutions. By this method it is hoped to make the study itself of great interest and to furnish the student with a better understanding of our present civilization, because many of the customs and institutions, and even the problems, of the present time, have such intimate connection with the past that they can be understood only by careful study of their origin and growth. By this

method it is hoped as well that the student may be helped to a more perfect and careful interpretation of political history itself; for every department of the life of the people is influenced by every other, and the political life and practices of any period can be understood only by noting carefully the history of that people and, as well, their social, industrial, and religious institutions and the influence of these upon their politics. The presentation of the following courses in this department has then these objects: to impress a knowledge of the subject for its own sake; to broaden the view and discipline the memory, imagination, judgment, and sympathy of the student; to discover the origin and growth of both the good and the evil in our modern civilization; so carefully to interpret the past, if possible, that lessons may be drawn from it for the present: in simple, to try to interpret and understand the present civilization in the light of history; and, finally, to give a proper equipment to such students as expect to become teachers of history. The methods of instruction, varying somewhat with the different courses, include text-book work, lectures, readings and taking of notes on assigned topics, preparation of theses and essays, map work, and use of original sources.

11 Constitutional, Political, and Social History of England

This course is divided into groups of subjects on the basis of the contents of Terry's *History of England.*

(a) Teutonic England: The Era of National Foundation.

(b) Feudal England: The Era of National Organization.

(c) National England: The Era of National Awakening.

(d) Imperial England: The Era of National Expansion.

Special consideration is given to such subjects as the following:

The growth of the Parliamentary Constitution and the Rise of Cabinet Government.

The Struggle against Royal Despotism and the Rise of the Commons as a factor in Government.

The Influence and Character of the Renaissance and Reformation.

The Place and Power of Puritanism.
Motives and Methods of English Colonization.
Growth of Democracy and Parliamentary Reform.
Relation of England to Ireland and Home Rule.
Modern Industrial Development.
First semester. Four hours. Course 14, second semester.

12 Survey of the Colonial, Constitutional, and Political History of America

Epochs of American History is used as a basis for the study, supplemented with lectures, readings, etc. Each student is expected to do a prescribed amount of reading in reference works and to write essays and papers on selected subjects. The study divides into two main divisions, the first division, down to 1789, and the second division, from that date to the present time.

First and second semesters. Three hours. Alternates with course 13. See course 18, page 69.

13 Mediaeval and Modern Europe

European History from the Germanic Migrations which broke up the Roman Empire in the West to the Congress of Vienna. Special attention is given in this course to the history of Germany and France, with lectures and references sufficient to furnish the student with a knowledge of the rise and development of other countries of Europe, and of their relation to the progress of civilization. The Religious Reformation and the French Revolution receive very full consideration, while more than usual attention is devoted to such other subjects as:

The Germanic Migrations and the Break-up of the Empire.
The Establishment of the Kingdom of the Franks.
Germanic Ideas of Law and Customs.
The Feudal System.
Extension of the Church; and Conflict between the Papacy and Empire.

Rise and Conquest of Mohammedism.
The Crusades.
The Growth of the French Monarchy.
The Napoleonic Wars.
The Congress of Vienna.

First and second semesters. Four hours. Alternates with course 12.

14 History of Recent Times

European History from 1815 to the present day.

This course begins with the rearrangement of Europe by the Congress of Vienna, and traces the influence of the revolutionary movement and spirit on the several countries of Europe, the unification of Italy and Germany, and the development of Russia. It involves a consideration of many interesting and perplexing questions in European life and politics, and leads to a discovery of the conditions in the home countries whence come many immigrants to America. The course closes with a series of lectures and studies on "Europe and the World of Today."

Second semester. Four hours. Course 11, first semester.

15 History of Ancient Civilization

This course aims to do three things: first, to furnish a thorough preparation for teaching Ancient History in high schools; second, to help students looking forward to professional or public life to an understanding of the history of ancient people and the character of their civilization; and, finally, to aid the student of history and politics to interpret the character and contribution of the ancient nations to the general civilization of the race. The method includes: first, a survey of the history of the ancient nations; second, a study of the content and character of the ancient civilizations and of their contribution to history. In this last an effort is made to discover and to realize the significance of the Hebrew, the Grecian, and the Roman elements in European and modern civilization.

First and second semesters. Four hours.

Law and Politics

The courses in this department have to do with states and their relations to each other; with governments, their forms and workings and institutions; and with related subjects. The work is intended to cultivate breadth of view and sound thinking on governmental and political questions, to promote good citizenship, to furnish a preparation for the study of law and for the teaching of civil government, and to provide a training which shall be helpful and useful to those who may enter a business career or professional life. The courses in history are arranged as a preparation for the work in this department.

16 International Law

This course affords a careful study of the laws of war, peace, and neutrality, together with a consideration of the proposed plans of arbitration. Particular attention is given to cases in which the United States has been directly interested, and the student is frequently referred to such cases as are found in Scott's *Cases on International Law.* Attention is also directed to the related subject of diplomacy and to the place and power of America in the affairs of states.

One semester. Four hours.

17 Administrative and Business Law

The course aims, not to fit the student to take an examination at the bar or to be his own lawyer, but rather to furnish a fair acquaintance with those legal principles and ideas which are involved in ordinary business affairs, and thereby to furnish him with such useful information as will enable him to know when he ought to consult a lawyer in order to avoid business pitfalls. Some of the subjects considered are the following: Contracts; Agency; Acquisition of Property and Transfer of Same; Wills; Deeds; Bankruptcy and Insolvency; Insurance; Negotiable Paper; Partnership; Stock-Companies; Corporations; Common Carriers; Domestic Relations and Wrongs.

One semester. Four hours.

18 American Government and Politics

This course is given one hour per week and continues throughout the year. It is offered in connection with the study of American History, course 12. The aim is to consider during the first few weeks "the development of the State, its several governmental agencies and activities." This is followed by a general study of the American Government, having special reference to the sources and development of the federal constitution, the state constitutions, the organization and working of our federal, state, and municipal governments, with allied political and social agencies.

Political Economy

19 Principles of Economics

This course consists of recitations with frequent written and oral tests, and of occasional lectures with assigned readings from standard authorities. The aim is to give a thorough drill on the fundamental principles of the science. In addition, the student is expected to prepare one or more papers on such subjects as: Land and Rent; Protection and Reciprocity; Labor and Wages; Enterprise and Profits; or other subjects of equal importance. During the second half of the year special attention is devoted to such subjects as: Modern Industrialism; The Modern Distributive Processes, and problems arising therefrom.

First and second semesters. Four hours.

20 Descriptive Political Economy

(a) Money, Banking, and Bimetallism.

(b) Taxation, Transportation, and Socialism.

This course consists of one semester of study on each of the series of subjects under (a) and (b) above.

In the series (a) the class uses:

Scott: *Money and Banking.*

Dunbar: *The Theory and History of Banking.*

Laughlin: *History of Bimetallism in the United States.*

In the series (b) the class uses:

Seligman: *Essays in Taxation.*

Johnson: *American Railway Transportation.*

Ely: *Socialism and Social Reform.*

The object in presenting these several subjects is to give the student a larger opportunity to study these very important and practical subjects than can be furnished in the single year allotted to the general course, and, at the same time, not to devote so much time or attention to any one subject that the student will be compelled to omit others equally important and desirable.

First and second semesters. Four hours.

21 History and Geography of Commerce

The aim of this course is twofold: first, to have the student secure the valuable information afforded by the study; second, to enable him to make independent study and investigation of government publications and others of similar character, in order that he may be able to make use of such publications on his own account. The text-books used are supplemented by the study of assigned references in government reports and the making of charts, tables, maps, and diagrams.

Day: *A History of Commerce.*

One semester. Four hours.

Suggested Groups with Major in History

1		2		3		4	
History	32	History	24	History	24	History	24
Philosophy	12	Sociology	16	English	18	Political Economy	16
Mathematics	6	English	12	Mathematics	6	Sociology	8
Biology	10	Mathematics	6	Philosophy	15	English	6
Chemistry	10	Philosophy	12	Biology	10	Mathematics	6
German	16	Science	10	Chemistry	10	Philosophy	6
Latin or French	8	German	16	German	16	Science	10
English	6	Latin or French	8	Latin or French	8	German	16
Bible	8	Bible	8	Bible	8	Latin or French	8
Electives	16	Electives	12	Electives	9	Bible	8
						Electives	16
	124		124		124		124

Groups 1 and 2 are especially adapted to the needs of those who contemplate the study of law.

Group 3 is designed to meet the needs of those who may desire to prepare to teach History and English in the high schools.

One year of work in Politics or in Practical Sociology may be classed with the work in Economics by students seeking to do major work in this department.

The student should plan to take courses 12 and 18, and course 13 in freshman and sophomore years, and courses 11 and 14 and course 15 in junior and senior years.

HOME ECONOMICS

Miss Wood; Miss Van Dyke

The laboratory of Household Science is located in a large room on the ground floor of Rankin Hall. It is fully equipped in every respect for carrying on the work offered.

It is not the purpose of the college to train teachers in this line of work, but rather to encourage a reasonable amount of election in these utilitarian studies, to the end that the student may be better fitted to meet the demands of the home.

Students who intend to take up any laboratory work in this department should come provided with a neat plain blue chambray house dress; a white apron suitable for the work until the uniform apron can be provided; a pair of holders 5 inches square, and a small hand towel. Each student is required to pay a fee to cover the cost of materials used.

11 Preparation of Foods

A theoretical and practical course in the fundamental processes of cookery. The course includes a study of the composition of foods; their classification; food economy; selection, care and preservation of foods; proper combinations for meals.

First and second semesters. Two three-hour periods per week.

12 Advanced Cookery

This course includes advanced practical work in fundamental cooking processes and the planning of menus to meet the needs of the body, with special reference to the cost of foods. This course is open to those who have completed course 11.

First semester. Two three-hour periods per week.

13 Dietetics

A theoretical and practical course in the fundamental principles of human nutrition. Open to those who have completed course 12.

Second semester. One two-hour period per week.

14 Household Economics

A course of lectures and practical work treating of the care and general management of the home, under varying conditions.

First semester. One hour.

15 Home Nursing

This course includes lectures and practical work in the care of the sick in the home, with special reference to the preparation of food for the sick.

Second semester. One period, one and one-half hours, per week.

16 Home Decoration

This course includes a study of the principles of design as applied to interior decoration; wall coverings; floor coverings; curtains; hangings; furniture, etc. The course is designed to give the students a knowledge of these things from the economic as well as from the decorative point of view, in order that they may be able to choose intelligently those things best suited to their needs.

First and second semesters. Two hours.

17 Garment Making

This course includes the cutting, fitting and making from patterns of certain garments which involve the fundamental and practical problems in sewing. It includes practice in hand and machine sewing, care of machines, and such study of the textile fibers used and their processes of manufacture as shall

lead to judgment and taste in selection of material as suited in wearing quality, adaptability to use, and permanence of color. Students provide materials and patterns subject to approval of instructor.

Second semester. Two hours.

In connection with the work in Home Economics, the following courses will be of especial benefit and importance to the student, affording, as they do, a consistent, well-rounded, and practical body of knowledge:

Biology 19 and 23; Chemistry 11a and 22; Education 19; Philosophy 11; Physics 11a; Sociology 11 and 12.

These courses are described in detail under the several department headings.

LIBRARY SCIENCE

Miss Bean

11 Reference Work and Bibliography

The aim of this course is to acquaint the students with the library, to familiarize them with books of reference, to enable them to look up subjects expeditiously, to encourage them in independent research, and to aid in the valuation of authorities, and in proper selection of material upon specific subjects. The course includes the study of reference books, indexes, periodicals, and bibliography. It is intended especially for the freshman and is given in connection with English 11.

12 Library Methods

This course is especially designed to enable those who are preparing for teaching to organize school libraries and to direct reference work. In addition to a systematic study of the resources of a library, as offered in course 11, particular attention is given to methods of classification, cataloguing, and general library administration. The course is open to juniors and seniors.

Second semester. One hour.

MATHEMATICS

PROFESSOR RAY; PROFESSOR DANCEY; MR. MARTIN

The following courses in mathematics will provide material for such training and culture as may be deemed essential to every symmetrically developed mind, and will prepare the student for the various branches of science in which mathematical analysis is employed. Students who intend to specialize in any department of applied mathematics should not omit any branch of pure mathematics which may be necessary to equip them properly for their chosen field.

11 Algebra

The course begins with a review of various subjects of elementary algebra, with stronger requirements in matters of development than is possible in a beginning course. The more advanced work may include the progressions, ratio, proportion and variation, binomial theorem, logarithms, series, probability, graphical representation, and solution of equations. Required of freshmen.

First semester. Three hours.

11a Algebra

This course is designed to supplement course 11. Special attention is given to the principles of graphs and the sketching of algebraic and transcendental functions. The work forms an excellent basis for the study of analytical geometry.

First semester. Two hours.

12 Trigonometry

Students taking this course must have completed plane and solid, including spherical, geometry. The co-ordinates of a point and their relation to the change of angle at the point of origin are first presented; then the function of an angle and thorough drill upon the equations involving the functions, and the application of these equations to the solution of the right

triangle, with and without the use of logarithms. The development of formulas used in the solution of all triangles receives especial attention. Required of freshmen.

Second semester. Three hours.

13 Algebra, Trigonometry, and Graphical Methods

This course includes material, selected and co-ordinated, from algebra, trigonometry, and analytic geometry, with drill in use of instruments and methods of computing. Required of freshmen in engineering.

First semester. Five hours.

14 Analytic Geometry and Trigonometry

Open to students who have had courses 11 and 12, or 13. Further work in trigonometry is given, followed by plane and solid analytical geometry. Required of freshmen in engineering.

Second semester. Five hours.

15 Differential and Integral Calculus

Open to students who have had course 14. All who wish to go beyond the elements of the physical sciences should take this course, as the modern treatment of these subjects is based upon the calculus.

First semester, five hours. Second semester, four hours.

16 Differential Equations

Open to students who have had course 15. Recommended to those who wish to specialize in mathematics or physics.

First semester. Three hours.

17 Theory of Equations and Graphical Analysis

The subject matter of the course is based on the treatment of the Theory of Equations as found in Dickson's *Introduction to the Theory of Algebraic Equations* and is supplemented by an analytical study of various types of equations from the graphical view point.

First semester. Three hours.

18 Descriptive Geometry

Problems relating to points, lines, planes, and surfaces of revolution, with practical applications. The course requires four hours of drawing, one home exercise, and one recitation per week. Text: Phillips and Millar's *Descriptive Geometry.* Prerequisite: Mechanical Drawing.

First semester. Three hours.

19 Mechanical Drawing

This course presents the elements of machine drafting. Instruction is given in the use of instruments, lettering, sketching machine parts, working drawings, tracing, and blue printing. The course is based on Phillips' plates, Adams' *Mechanical Drawing* and Phillips' *Lettering Manual.* Students are required to provide themselves with instruments of good quality.

First and second semesters. Six hours.

20 Surveying

Lectures, recitations, field and office work in the theory, care, use, and adjustments of Wye and dumpy levels, hand level, compass, transit, and planimeter, in the platting of areas and profiles, and in the making of topographic maps. The field work includes the use of chain and tape, determination of areas with tape and transit, differential and profile leveling, running of lines and traverses, triangulation, observation on the sun and Polaris, and the use of the stadia. A careful study is made of United States land survey methods, original surveys, re-establishment of corners and boundaries, and court decisions relating thereto. Problems are assigned in farm surveying, relocation of boundaries, partition of land, etc. Johnson's *Surveying*, Smith's *Surveying Manual*, and adjustment blue prints are used in the course.

First and second semesters. Six hours of field work and two hours of class work per week. Six unit hours.

20a Surveying

A one semester course similar to the first semester of course 20, but so modified as to accommodate those who do not expect to enter engineering. The course includes the use of the chain and tape, use and adjustments of the Wye and dumpy levels and the transit, computation of areas, and government surveying. Equipment for the course will be: Smith's *Field Manual;* notebook for field use; adjustment blue prints; small pocket lens; and adjustment pin.

First semester. Three hours.

21 Advanced Surveying

Topographic and hydrographic surveying, and the elements of railway curves. The field work includes the use of the plane table and stadia in making topographic surveys, a survey of the bed of Lake Pewaukee, measurement of the discharge of the Fox River, and method of locating curves. The office work includes calculations, platting and marking of maps. Johnson's *Surveying* and Allen's *Railway Curves* are used in this course.

Second semester. One lecture and six hours of field and office work per week.

22 Mechanics

A course in applied mechanics based on Maurer's *Technical Mechanics.* Physical principles are here applied especially to engineering problems. The subject requires a thorough working knowledge of calculus and elementary mechanics.

First and second semesters. Four hours.

23 Teachers' Course

For those who are preparing to teach any branch of mathematics a special course is offered with a credit of one unit hour, this course to be taken in connection with Education 17.

Suggested Groups with Major in Mathematics

1		2		3	
Mathematics	20	Mathematics	20	Mathematics	20
Physics	14	History	16	Physics	14
Chemistry	15	German	16	Philosophy	15
Mineralogy	5	French	8	Chemistry	15
Geology	6	Physiology	10	Physiology	10
German	16	Biology	10	German	16
French	8	Chemistry	10	French	8
English	6	English	6	English	6
History	8	Philosophy	6	Bible	8
Philosophy	6	Bible	8	History	8
Bible	8	Electives	14	Electives	4
Electives	12				
	124		124		124

Group 1 may be taken as a pre-engineering group.

Groups 2 and 3 would be suitable for those who are preparing to teach.

MINERALOGY

PROFESSOR KEMMERER

The work in mineralogy is especially adapted to the needs of students of chemistry and engineering.

11 Descriptive and Determinative Mineralogy

Crystallography, including a study of crystal forms; the measurement, calculation, and projection of crystals; the physical and chemical properties, origin, formation, decomposition, distribution, uses, and determination of the more common minerals. Laboratory practice in identifying minerals by their physical properties and by blow pipe methods. Emphasis is given to the important relation existing between crystallography and the sciences of chemistry and physics. Text: Dana, *Mineralogy*. Prerequisites: Chemistry 11 and 12, and Trigonometry.

First semester. Five hours. Given in 1915-16, and alternate years.

MODERN LANGUAGES

PROFESSOR GUILD; DR. ROGERS; MISS NICHOLS

In planning the courses for this department, an effort has been made to combine classical training with a practical knowl-

edge of German and French as living languages. The masterpieces of the two languages are critically studied in such a way as to lead the student to a clear appreciation of the literary development of the two nations, and to help him to interpret clearly the thought of their great writers and to understand the inner life of these peoples as revealed in their literatures. While prominence is given to modern languages as aids to the broad, liberal culture of college training, an effort is made to give such a command of the languages as will be of value in practical everyday life. It is frequently urged against the modern language courses of American colleges that, while students may be able to read the works of the great authors, their knowledge is of no service in travel, in business life, or in independent literary work. It is the object of this department to meet this criticism by giving something practical, by training not only the eye, but the ear and the tongue as well.

German and French are, as far as seems advisable, the languages of the class room, and special attention is given to the true native idioms. Special courses are given for those who wish to make use of German and French in scientific research.

German

11 Freshman German

Schiller: *Jungfrau von Orleans;* Goethe: *Hermann und Dorothea;* Freytag: *Die Journalisten.* Memorizing of poems and study of short plays. A thorough review of grammar carried on entirely in the German language. Composition and reproductive translations throughout the year. Pope: *Writing and Speaking German.* One day of the week is devoted entirely to German conversation and, through outlines and complete lists of questions, students are taught terms and forms used in home, business, and travel.

First and second semesters. Four hours.

12 College Beginning German

For the benefit of students who enter college with no knowledge of German, a special class is formed which covers two years' work in one year and prepares for German 11. Only those who have maintained a high grade of scholarship in other subjects, and who are capable of the closest application will be admitted to this class.

First and second semesters. Five hours.

13 Sophomore German

Stroebe and Whitney: *Geschichte der deutschen Literatur*, with further study of authors. *Das Lied von der Glocke*, and other ballads and poems of famous authors. Mueller's *Deutsche Liebe;* or Schiller's *Maria Stuart.* Supplementary reading: Freytag's *Soll und Haben;* Heine's *Harzreise;* Scheffel's *Ekkehard.*

During the year the same practical work is continued as in course 11. Lambert: *Alltägliches* is used as a basis for conversational work. Reproductive work and independent themes are required in this course.

First and second semesters. Four hours.

14 Rapid Reading and Conversation

For students wishing to obtain fluency in conversation and reading, a short course is offered, to follow German 13. The assigned texts are: Eichendorf, *Aus dem Leben eines Taugenichts*; Schiller, *Jungfrau von Orleans;* Lagerlöf, *Eine Gutsgeschichte;* Niese, *Licht und Schatten.*

One semester. Three hours.

15 Lessing

Nathan der Weise, Emilia Galotti, and selections from *Laocoon.* A study of Lessing as a critic and of his influence upon the development of a national drama. An elective course for those who have had courses 11 and 13.

First semester. Three hours. Given in alternate years with course 17.

16 Goethe

A critical study of the different periods of Goethe's literary activity, together with study of *Faust, Part One.*

Second semester. Three hours. Given in alternate years with course 17.

17 Contemporary German Literature

A study of novels, lyrics, and dramas of the modern period portraying the social and political tendencies of the times.

First and second semesters. Three hours. Given in alternate years with courses 15 and 16.

18 Scientific German

For students specializing in science a course of reading in current scientific German is provided. It consists of the reading of German texts and of conversations, discussions, and written work in German, the aim being to familiarize the student with technical German.

First and second semesters. Three hours.

Suggested Groups with Major in German

German	24	German	24	German	24
French	16	Latin	16	English	18
English	12	English	6	French	8
History	8	French	8	Philosophy	15
Mathematics	6	Philosophy	15	History	8
Science	10	History	8	Mathematics	6
Philosophy	6	Mathematics	6	Science	10
Bible	8	Science	10	Bible	8
Electives	34	Bible	8	Electives	27
		Electives	23		
	124		124		124

French

11 Elementary French

(a)—Grammar; mastery of verbal inflections, construction of sentences, and idiomatic usages of the French language by constant oral drill and written exercises, with reading of selected stories.

First semester. Four hours.

(b)—Reading of selected intermediate French texts, with conversations, grammatical analysis in French, and consecutive French composition.

Second semester. Four hours.

12 Literary French

Reading and study of masterpieces of French classic literature, ancient and modern, including both prose and poetry. The texts read will be varied from year to year to give opportunity for additional work in the subject. All class work, oral and written, is in French.

First and second semesters. Four hours.

13 Scientific French

This course includes an amount of reading equal to that of course 12, and the method of study is the same. The matter read and studied is intended to represent all departments of scientific study as set forth in the writings of leading French scientists.

First and second semesters. Three hours.

MUSIC

PROFESSOR SHEPARD; PROFESSOR BISHOP; MISS WILLSON; MRS. WARD

Students in the college have an opportunity of electing certain work in music which has recognized cultural and scholarly value. A maximum credit of thirty unit hours in Theory, History of Music, Appreciation of Music, and related subjects may be allowed toward the degree of Bachelor of Arts.

A further presentation of the work in music may be found under the statement of the Department of Music on page 95.

11 Harmony

Elementary course. Music notation, knowledge and use of the various clefs, the principle of transposition; keys, scales, signatures, intervals, triads and their inversions, chords of the seventh, and harmonization of melodies and figured basses.

First and second semesters. Two hours.

12 Harmony

Advanced course. Study of chord relationships, and progressions, modulation, altered chords, enharmonic changes, suspension, ornamental tones, organ point, melodic figuration and accompaniment. The work is done through the harmonization of melodies and figured basses.

First and second semesters. Two hours.

13 Counterpoint

Supplying two, three, or more additional voices in the five orders of counterpoint to choral melodies and other canti firmi.

First and second semesters. Two hours.

14 Counterpoint; Canon and Fugue

Double counterpoint in three, four, or more parts. The study and writing of canons in the various intervals, and of figures in three and four voices, with careful study of the works of Bach and other contrapuntal masters.

First and second semesters. Two hours.

15 Ear-training and Solfeggio

First and second semesters. Two hours.

16 Ear-training and Solfeggio

First and second semesters. One hour.

17 History of Music

A general survey of musical history from its crudest to its most perfect forms, with illustrations and lectures.

First and second semesters. One hour.

18 History of Music

Continuation of Course 17.

First and second semesters. One hour.

19 Musical Form and Analysis

This course treats of the analysis of the smaller song forms, variations, dance forms, masses, concertos, sonatas, and fugues.

First and second semesters. Two hours.

20 Musical Forms and Analysis

Continuation of Course 19.

First and second semesters. One hour.

21 Musical Appreciation

Lectures on the growth and development of music and its relation to the other arts and literature. The analysis of music forms and a general survey of musical literature with illustrations, vocal and instrumental. This course requires no previous knowledge of music and is open to students in all departments of the college.

First and second semesters. One hour.

22 Applied Music

Advanced work in piano, voice, organ or violin.

23 Ensemble Playing and Singing

First and second semesters. One hour.

24 Public School Methods

First and second semesters. Two hours.

25 Public School Methods

Continuation of Course 24.

First and second semesters. Two hours.

26 Normal Methods in Piano

First and second semesters. One hour.

27 Normal Methods in Voice

First and second semesters. One hour.

28 Choral Music

Rehearsals of the Choral Union and Glee Club.
One hour of credit for the entire year.

29 Opera Class

The study of classical and modern operas with dramatic presentation and scenic investiture.
One hour of credit for the entire year.

PHILOSOPHY

Professor Rogers

The work in this department is designed to familiarize the student with the more fundamental lines of philosophic thought and to enable him to think consistently and independently on the ultimate problems of reality, the physical world, and the human self, and to entertain clear ideas of the relations of these problems to his own life and conduct. To this end the courses in history of philosophy, logic, and psychology have been planned to meet the needs of those students who may elect the work for general culture and discipline, and also for those students who may wish to pursue the work with a special interest in philosophy or education. Courses 11, and either 12 or 13, are required of all students; the others are elective. A minimum of 26 unit hours, including thesis, is required of those students who elect a major in philosophy and education.

11 Psychology

A study of the general field of psychology from the biological point of view. Recitations, lectures, experiments and demontrations.
First semester. Three hours.
Given in the Department of Education.

12 Logic

A study of the principles of correct reasoning and of the methods of science, and an outline of the philosophical theory of thought. Recitations, lectures, and practical exercises.

Second semester. Three hours.

13 History of Ancient and Mediæval Philosophy

Special stress is placed upon pre-Socratic, Socratic, Platonic, and Aristotelian systems of philosophy, with full outlines and discussions of the scientico-philosophical systems.

First semester. Three hours.

14 History of Modern Philosophy

A study of the development of philosophy from the Renaissance under Greek inspiration to the present century. The influences of religious and scientific thought and of political and economic conditions upon philosophy are closely traced.

Second semester. Three hours.

15 Ethics and Religion

A study of the facts and problems of social life, together with a review of the principal ethical theories. The history and philosophy of religion. Recitations, lectures, and collateral reading.

First semester. Three hours.

21 Biblical Psychology

A study of the Bible doctrine of man, of the development of Christian thought, and of the grounds of theistic philosophy.

Second semester. Two hours.

Suggested Groups with Major in Philosophy

Philosophy and Education	30	Philosophy	26	Philosophy	26	Philosophy	26
English	6	English	12	Biology	16	History	16
Mathematics	6	Mathematics	6	English	6	English	6
History	8	History	8	Mathematics	6	German	16
Science	10	Science	10	History	8	French or	
German	16	Latin or		German	16	Latin	8
Latin or		French	8	Chemistry	10	Bible	8
French	8	German	16	Latin or		Science	10
Bible	8	Bible	8	French	8	Mathematics	6
Electives	28	Electives	30	Bible	8	Electives	28
	124		124	Electives	20		124
					124		

PHYSICS

Professor Dancey; Mr. Boeck

It is the aim of the Department of Physics to present courses which will furnish preparation for technical work, for teaching, or for advanced scientific study. Physics relates itself in such a way to other sciences and to mathematics as to make it a very desirable course for the student who expects to pursue the study of either science, mathematics, or engineering. Courses 11 and 12 are required in all engineering schools, and courses 13 and 14 are usually either required or elective. From the cultural standpoint physics should be of interest to any one who wishes to acquaint himself with the laws of nature. Recent advances in the sciences make the understanding of underlying principles especially desirable.

11 General Physics

This is a course in the fundamental facts and principles of physical science. The work of the class-room is closely correlated with that of the laboratory, where the student is trained in accurate verifications and proof of physical laws as well as in the care and manipulation of apparatus. During the first half year mechanics, heat, and sound are studied. Electricity, magnetism, and light form the subject matter during the second semester. Duff: *A Text-Book of Physics.* Recommended for sophomores in engineering and mathematics.

First and second semesters. Two lectures, two recitations, and two laboratory periods each week. Ten unit hours.

11a General Physics

A course covering the same ground as course 11, but less mathematical. This course is arranged to meet the needs of students in science, medicine, and liberal arts who wish a comprehensive general course in physics in which the mathematical difficulties are reduced to a minimum. Special attention is given to correlating closely the work of the class-room and the laboratory. As far as practicable the laboratory notes are pre-

pared in the laboratory under the direction of an instructor. Lectures, recitations, and laboratory require a minimum of eight hours per week. No mathematics is required beyond the usual requirements for college entrance. Kimball: *College Physics.* Open to all college students.

First and second semesters. Two lectures, two recitations, and two laboratory periods each week. Ten unit hours.

12 Mechanics

A theoretical and experimental study of the general principles of motion and equilibrium, forces, torques, rotational inertia, etc. The treatment is more analytical than in course 11. Text: Johnson's *Theoretical Mechanics.* Prerequisites: Physics 11, and Calculus.

First semester, three hours; second semester, two hours.

13 Electrical Measurements

In this course the more general laws of electricity and magnetism are discussed, the practical equations employed in the laboratory are derived, and their application in electrical engineering developed. The laboratory work includes the measurement, by one or more methods, of electric currents, resistance, electro-motive forces, temperature-coefficients, capacity; a study of the magnetic properties of iron and steel; thermo-electric effects; the use of Carey Foster bridge, potentiometer, copper voltameter, etc. Text: Brooks and Poyser's *Electricity and Magnetism,* and Carhart and Patterson's *Electrical Measurements.*

First and second semesters. Two recitations and two laboratory exercises each week. Eight unit hours.

14 Electrical Testing

A laboratory course covering the operation of dynamos, motors, and transformers.

First or second semester. Credit according to amount and quality of work done.

15 Principles and Practice of Photography

A course of lectures and laboratory work covering the laws of photographic action. The laboratory work includes a study of time of exposure and time of development on plate density and opacity, practice in securing properly exposed negatives, making of lantern slides, enlarging, etc.

First semester. Three hours.

16 Light

Lectures and laboratory work based on Edser's *Light for Students* and Mann's *Physical Optics.* A study of interference, dispersion, diffraction, and polarization.

Second semester. Four hours.

17 Physical Manipulation

A practice course in glass blowing, soldering, etc.

First or second semester. One hour.

18 Teachers' Course

Assigned readings with reports and discussions of methods of teaching physics together with practice in actual teaching.

First or second semester. One unit hour.

Suggested Groups with Major in Physics

1		2		3	
Physics	24	Physics	24	Physics	24
Mathematics	20	Mathematics	16	Mathematics	24
Chemistry	20	Chemistry	15	Chemistry	20
Biology	10	Biology	10	German	20
German	16	German	16	English	6
Philosophy	6	Philosophy	6	Philosophy	6
English	6	English	12	Economics	4
History	8	History	8	History	8
Bible	8	Bible	8	Bible	8
Electives	6	Electives	9	Electives	4
	124		124		124

PUBLIC SPEAKING AND DRAMATIC LITERATURE

PROFESSOR RANKIN

Public Speaking

The purpose of this department is to develop the power of expression, either as general culture, or as preparation for public speaking.

The method of instruction is founded upon the laws of evolution in art, and develops the sources of power through natural expression. It involves culture of the broadest kind, requiring intellectual concentration, esthetic appreciation, and power to control an audience.

Course 12 in argumentation and debate aims to develop clear thinking, logical reasoning, close observation, quick mastery of expression, persuasiveness, fair methods, and courtesy. In course 13 the study of great orations, and the attempt to render them involves analysis, interpretation, dramatic sympathy, appreciation of literary style, ability to work with an audience. After studying examples of the various forms of address, application of the principles suggested is required in the preparation of original productions. Course 11 is especially adapted to the preparation for public recital work. Course 16 is of great practical value for those who expect to teach.

To college students wishing to specialize in this work, a two years professional course is offered. The advantage in this school of expression lies in the opportunity it gives of taking almost all of the instruction under the head of the department. Twenty-five private lessons under Miss Rankin during each of the two years will be given to the candidates for graduation and for these lessons a special fee of twenty-five dollars each year will be charged. Otherwise the work is included in the regular tuition of thirty dollars a semester, and credit is given for all the courses toward a regular A. B. degree. If a student plans his work at the beginning of the college course, it will be possible to secure, at the end of four years, an A. B. degree, and also a certificate of graduation from the department of Public Speaking and Dramatic Literature. Full credit for the work done in this department is given in the best professional schools.

Four intercollegiate debates occur each year and three state oratorical contests. Two plays are given during the year under the direction of the department.

Students may be secured as readers by application to the head of the department.

11 Literary Interpretation

Impersonation, dramatic reading, expressive voice culture, responsiveness in gesture, preparation for public recitals.

First and second semesters. Four hours.

11a Literary Interpretation

Evolution of expression, dramatic art, recitals.

First and second semesters. Four hours.

12 Argumentation and Debate

Study of analysis, evidence, refutation, brief-drawing and presentation; practical application of these principles in debate.

Text-book: Denny, Duncan and McKinney, *Argumentation and Debate.*

First and second semesters. Two hours.

13 Public Speaking

Study of representative orators, their lives and methods; analysis of their speeches. Study of different forms of address: the eulogy, the legislative address, and the after dinner speech. Original work. Extempore speaking.

Text-books: Hardwick's *History of Oratory;* Baker's *Forms of Public Address.*

First and second semesters. Two hours.

14 Pulpit Oratory, Bible and Hymn Reading

First semester. Two hours.

15 Parliamentary Law

First semester. One hour.

16 Normal Course

Practice in teaching expression; voice culture; physical culture; visible speech.

First and second semesters. Five hours.

16a Platform Art

Voice culture; physical culture; gestures; interpretation.

First and second semesters. Five hours.

Dramatic Literature

These courses include the history of the drama, the laws of dramatic art, the analysis of plays, the study of literary style. They emphasize especially the interpretation of character, in recognition of the fact that the dramatic ability to see from another's standpoint is of fundamental importance to helpful service along all lines.

11 Dramatic Interpretation of the Book of Job

Second semester. Two hours.

12 Shakespeare

Thorough study of two tragedies, two comedies, and two historical plays, including extensive character analysis founded on the text, character sketches, study of ethical problems, dramatic analysis, criticisms by prominent writers, and dramatic interpretation.

First and second semesters. Two hours.

13 Shakespeare: Reading Course

The complete works of Shakespeare, his life and art. History of the drama.

First and second semesters. Three hours.

14 Modern Drama

Ibsen, Hauptmann, Maeterlinck, Rostand, Phillips, Yeats and others.

First and second semesters. Three hours.

The following two years' course is offered:

FIRST YEAR			SECOND YEAR		
Public Speaking	11	4 hrs.	Public Speaking	11a	4 hrs.
Public Speaking	12	2 hrs.	Public Speaking	13	2 hrs.
Public Speaking	15	1 hr.	Public Speaking	16a	5 hrs.
Public Speaking	16	5 hrs.	Dramatic Literature	14	3 hrs.
Dramatic Literature	13	3 hrs.	Normal Work.		
Private Lessons.			Private Lessons.		
Gymnasium.			Gymnasium.		
Psychology	11	3 hrs.	Education	17	3 hrs.
English	11	6 hrs.	English		6 hrs.

Suggested groups for those wishing to take an A. B. degree and also to graduate from the department of Public Speaking and Dramatic Literature in four years:

1		2		3	
Public Speaking	24	Public Speaking	24	Public Speaking	24
English	12	English	12	English	12
Dramatic Literature	12	Dramatic Literature	12	Dramatic Literature	12
Language	16	German	16	German	24
Bible	8	French	16	French	8
Education	6	Bible	8	Bible	8
Mathematics	6	Education	6	Education	12
Science	10	Mathematics	6	Mathematics	6
History	8	Science	10	Science	10
Electives	22	History	8	History	8
	124	Electives	6		124
			124		

SOCIOLOGY

PROFESSOR ROGERS

In this department lectures are given on the general subject of sociology, together with a survey of the field of social relations, with the view of establishing principles and laws. The course of study offered aims to fit the student to make a personal study of social questions, to interpret modern social problems, and as far as possible to grapple with and understand the perplexing questions of our modern life, thus preparing him for an intelligent and responsible citizenship. By a careful study of the nature and laws of human society it is designed to

prepare the student for a continuous study of society and public policy throughout life. The student is made acquainted with a number of the works of our best writers on the subject of sociology and social problems. In addition to this more theoretic and scientific study, the practical side of the subject is emphasized. Each student is enabled, through the lectures and by means of wide reading and discussions in the classroom, to secure a general appreciation and understanding of modern social and civic conditions. The dependent class will be studied with special reference to slum conditions; the defective class, together with the treatment of the same; and the delinquent class, with the causes and prevention of crime. Personal acquaintance is secured with some important phases of present social and civic life by visits to charitable and penal institutions and agencies of social betterment in and about Milwaukee.

11 General Sociology

Gidding's *Elements of Sociology.* A study of the nature and laws of human society, familiarizing the pupil with the principal forms of social organization; with the thoughts, the sympathies, the purposes, and the virtues that make society possible; with the benefits that society confers; and with the conduct that worthy membership of society requires.

First semester. Three hours.

12 Practical Sociology

Henderson's *Social Elements.* The object of this course is to direct attention to the phenomena of human associations; to teach the methods of classifying facts of this order; to give training in the search for efficient causes; to show how to interpret social duties which rise out of conditions and relations; and especially to show the connection of order and progress with the institutions and methods of education.

Second semester. Three hours.

Department of Music

The object of the department of music is to offer extensive courses in the practical and the theoretical study of all branches of the art and science of music, and to furnish instruction in such other subjects as may be considered necessary for the fullest development of the student's faculties, preparatory to the pursuit of music as a profession. It provides also for the study of music as an adjunct to general culture, or as an accomplishment.

Instruction is offered in piano, voice, organ, violin, and in history of music, harmony, counterpoint, composition, musical form and analysis, choral practice, solfeggio and ear-training, and methods in public school music. Special arrangements are made for students not wishing to take up the literary work required for the degree of Bachelor of Music, but desiring to devote themselves more especially to the study of music with little or no collateral work and with a view of graduation either in the teachers' course or graduation class. However, it is expected that boarding students will take some literary studies. Students taking advanced work in music may be allowed thirty unit hours, twenty hours in theoretical music and ten in advanced applied music, towards the degree of Bachelor of Arts. No credit in practical music will be given until the student shall have completed two years' work in Theory, and no credit will be allowed for less than a year's work in Theory.

Advantages

The advantages of instruction in a conservatory, or college of music, over private instruction are so manifold and varied and so obvious to the serious minded that merely to mention the most important will be sufficient. The musical profession, unfortunately, includes many incompetent teachers, since it is a profession open to all, whether properly qualified or not. The faculty of the music department of a college is chosen with special reference to the fitness and ability of its members as teachers and artists; it would not be in the interest of such an

institution to sacrifice its reputation by employing other than capable and expert teachers. Theory and practice should be united in the successful study of music. It is possible to secure good instruction from private teachers, provided the best are selected; still it is only a conservatory with carefully chosen specialists in every department that can offer to the student the facilities necessary for securing a complete equipment as a musician and give him the necessary preparation for successful artistic work as teacher or virtuoso. Again, the atmosphere of a conservatory is in itself stimulating. The broadening and inspiring influence of a good college is inimical to the limited culture and narrow horizons to be avoided by music students of ambition and high ideals. A conservatory cannot fail to create ambition and self-reliance among its students. By observation of the attainments of those who have acquired a higher degree of proficiency, the student is inspired to a greater effort, his forces are directed along right lines, and his perceptive and critical faculties are sharpened. Confidence and self-control are acquired by frequent performances before others, and the student is surrounded by influences helpful to the cultivation of a refined musical taste.

Recitals

Frequent recitals are given by members of the faculty and the students, the latter being thus enabled not only to cultivate their musical taste by hearing the best music interpreted by competent artists, but also to develop to the fullest extent their own ability for public performance. The close proximity of Carroll College to Milwaukee gives to the students the advantages of living in a musical center. Each year a series of concerts by artists of distinction is given at the college.

Courses in Music

I. A four year course in Applied Music, Theory, and History of Music, with literary requirements leading to the degree of Bachelor of Music.

II. A four year course in Applied Music, Theory, and History of Music, leading to a Diploma from the School of Music.

VOORHEES COTTAGE

III. A two year Normal Course in Piano Methods.
IV. A two year course in Vocal Methods.
V. A two year course in Public School Music.
A Teacher's Certificate is given at the completion of Courses III and IV.

A detailed statement of specific subjects offered may be found on page 82.

The following course leads to the degree of Bachelor of Music.

Freshman Year

Applied Music (Piano, Voice, or Violin): Two private lessons (half-hour each) and not less than twelve hours of practice per week.
Harmony, course 11 (Music).
Ear-training and Solfeggio, course 15.
History of Music, course 17.
Literary Studies.

Sophomore Year

Applied Music: Two private lessons (half-hour each) and not less than twelve hours of practice per week.
Harmony, course 12.
Ear-training and Solfeggio, course 16.
History of Music, course 18.
Literary Studies.

Junior Year

Applied Music: Two private lessons (half-hour each) and not less than twelve hours of practice per week.
Counterpoint, course 13.
Musical Form and Analysis, course 19.
Ensemble, course 23.
Literary Studies.

Senior Year

Applied Music: Two private lessons (half-hour each) and not less than twelve hours of practice per week.
Counterpoint, Canon and Fugue, course 14.
Musical Form and Analysis, course 20.
Musical Appreciation, course 21.
Ensemble.
Literary Studies.

Students finishing the above course without the literary requirements will be granted a diploma from the School of Music.

Students finishing the sophomore year and taking the course in Normal Methods will be granted a Teacher's Certificate.

Candidates for degree or diploma in voice must have at least two years of pianoforte study, but the Counterpoint 13, and the Counterpoint, Canon and Fugue 14, are not required, and membership in the choral union, glee club, or opera class may be substituted for the ensemble playing of the junior and senior years.

The course in violin is the same as in piano, except that orchestral rehearsals may be substituted in part for the ensemble work of the junior and senior years.

PIANO

PROFESSOR SHEPARD; MISS WILLSON

Careful attention is given to the playing of every conservatory pupil at whatever age he or she may enter the institution. The most approved and modern methods are sought out and utilized in developing the student's capabilities, talents, and individuality. The utmost care is given to the development of a good touch, a sensitive ear, rhythmical accuracy and stability, and a proper understanding of musical phrasing and expression. The scientific principles underlying the technical methods of the modern pianist are fully explained and applied. While the standard classical composers are drawn upon for the greater part of the piano curriculum, the more modern romantic school

is by no means neglected. The conservatory recognizes the fact that pianists of the present day should be versatile and many-sided in their artistic attainments, and to this end the piano course is planned from its most elementary stage. The method of instruction is based principally upon private lessons. The best results are obtained only by individual attention to the needs, and careful study of the artistic, mental, and physical capacity, of each pupil.

During the last year, students in the teachers' course will pursue the studies having a direct bearing on the best methods of imparting musical knowledge, and will survey in a general and systematic way the materials for musical education from the beginning to the attainment of a certain degree of proficiency. In order to make the instruction given in this department thoroughly practical, pupils of various grades are utilized, thus affording the normal students the great advantage of doing actual teaching under the supervision of the experienced master.

Preparatory School

Hand culture and gymnastic exercises to secure muscular control of arm, wrist, and fingers. Foundation technical exercises based on the Leschetizky system for the cultivation of the touch and for the formations of the hand and preparation for the proper execution of scales, arpeggios, and octaves.

Etudes: Loeschhorn, Gurlitt, Herz, Kullak, Pischna, Krause.
Etudes: Op. 45 and 46, Heller.
Studies on Touch: Wieck.
Sonatinas: Clementi, Dussek, and Kuhlau.
Sonatas: Haydn and Mozart.
Classic and modern Compositions.

Freshman and Sophomore Years

Advanced technical studies, scales, arpeggios, broken chords, octaves.

Technical Studies: Pischna and Joseffy.
Studies in Velocity and *The Art of Finger Dexterity:* Czerny.
Two and Three-Voiced Inventions: Bach.

Octave Studies: Kullak.

Etudes: Cramer.

Sonatas and Pieces: Haydn, Mozart, Beethoven, Händel, Weber, Schubert, Schumann, Mendelssohn, Chopin, and compositions by modern composers.

Sight playing and ensemble class work.

Junior and Senior Years

Technical Studies: Phillip.

Gradus ad Parnassum: Clementi.

English Suites and Well-Tempered Clavichord: Bach.

Etudes: Chopin, Liszt, Rubenstein, Henselt, Moszkowski, etc.

Pieces and Concertos: Beethoven, Chopin, Schumann, Brahms, Saint-Saens, Liszt, etc.

Accompanying; sight playing; ensemble class work.

Post Graduate or Artists' Class

The artist school is especially designed for students who, having gained a theoretical knowledge, thorough and fundamental, and technical ability, are able to study the greatest works of classic and modern composers, and who desire to reach a higher standard of excellence as artists. The intellectual and other artistic requirements are considerably greater than those for graduation. One object in this course is to provide the student artist with a varied repertoire suited to his musical individuality and to his needs as a public performer.

ORGAN

PROFESSOR SHEPARD

Freshman Year

Students must complete the preparatory school of the piano course before admission is granted to the organ school.

Lemmen's *Organ School;* Nilson's *Pedal Studies;* Guilmant's *Practical Organist;* and smaller compositions for the church. The acquiring of an organ touch, both legato and staccato playing, and a systematic course of pedal playing. Choir accompanying and such work in improvisation and modulation as is essential to the ordinary church organist.

Sophomore and Junior Years

Preludes, Fugues and *Choral Vorspiele* of Bach. Easier Sonatas of German and French schools. Church and concert music of all countries. Improvisation in the various forms and the playing of elaborate services, including the arrangement of piano accompaniments for the organ and the reading at sight of vocal scores. A comparative study of the organ and organ music of all countries, with illustrations. Theoretical harmony and analysis and ear-training. Lectures on the history and construction of the organ in addition to the regular lectures on music and history.

Senior Year

The greatest sonatas and symphonies of all schools; the greater works of Bach and Liszt; and a study of the early compositions for organ and concertos with orchestral accompaniment. Theoretical counterpoint and canon; analysis of sonatas and fugues.

VOICE

PROFESSOR BISHOP

The course of study in this department includes:

(1) A thorough study of the essential principles of voice production and vocal technic, consisting of the correct use of breath, intonation, legato, accent, phrasing, and enunciation.

(2) A systematic study of the best vocal compositions, including works of the Italian, French, German, and English schools.

Careful attention is paid to the needs of each student, the course of instruction being based on the Italian school of training the voice. The purpose is to develop beautiful tone and an intelligent and artistic style of interpretation.

It is impossible to give a specified course of study, as the course necessarily varies for each student. The outline below indicates, in a general way, the character and extent of the work.

First Year

Preparatory work: Placing of tone; correct breathing; chest development; proper position in singing.

Studies: Vaccai: *Italian Exercises;* vowels and technical work; songs of moderate difficulty, with special attention given to phrasing, enunciation, and rhythm.

Second Year

Technical work continued. Studies: Vaccai; Sieber; Bordogni; Marchesi: *Italian Exercises.* The study of interpretation of songs and ballads from the best of the German, Italian, French, English, and American composers. Oratorio.

Third Year

More difficult studies in vocal technic. Artistic interpretation of songs of the classic literature of all schools. Songs of Schubert, Schumann, Franz, Brahms, and others.

Fourth Year

The Opera: Study of the recitative and aria from the works of Mozart, Gluck, Verdi, Gounod, Massenet, Wagner, and others.

The Oratorio: Händel, Haydn, Beethoven, Mendelssohn, Parker, Chadwick, and others.

Chorus

An opportunity is given to all students to join a choral study class and an opera class, and to become familiar with these branches of musical literature. College students are admitted free of charge. Applicants will be required to have their voices tested and must have some knowledge of reading vocal music at sight. All students in the Voice Department must become members of this Choral Society, unless excused by the director.

OTHER MUSIC

Instruction is given in other instruments, such as violin, guitar, and mandolin.

General music work is open to all students, as well as classes for beginners and advanced students in chorus work.

There are a Men's Glee Club and a Choral Society under the direction of Professor Bishop, and an Orchestra and Mandolin Club directed by Miss Willson.

Public recitals are occasionally given.

Schedule of Expenses

(For a Semester of 18 Weeks)

Pianoforte, 18 one-hour lessons (Mr. Shepard)	$54.00
Pianoforte, 18 half-hour lessons (Mr. Shepard)	27.00
Pianoforte, 36 half-hour lessons (Mr. Shepard and Miss Willson alternating)	40.50
Pianoforte, 18 half-hour lessons (Miss Willson)	13.50
Vocal lessons, 18 half-hour lessons	27.00
Vocal lessons, 36 half-hour lessons	40.50
Vocal lessons, 3 in class, 18 lessons	18.00
Piano practice, 1 hour per day	4.00
Music Theory: the same as private lessons. In classes the amount will be divided according to the number in the class.	
Lessons in mandolin and guitar, 18 lessons	13.50

Department of Physical Education

MR. FRIES, Physical Director

The purpose of this department is to create and foster a condition of vigorous health among the students of the college. Directed physical exercise is required of all students in their freshman and sophomore years. Four credits in the department are required for graduation.

The System of Exercises

All work is graded, systematic, and thorough, with the game or contest idea predominating for both men and women. A wholesome spirit of class rivalry is stimulated by class games and contests held at frequent intervals. In the fall and spring, outdoor games engage the attention of all students. For the young women there are tennis, field hockey, baseball, and basket-ball; for the young men, football, tennis, baseball, and track work. Each branch of sport terminates in a tournament or meet for class championship and honors.

For the less robust students, games requiring less physical exertion are provided. Common physical defects are corrected by special exercises, the purpose in all the work being to build up, strengthen, and keep strong the physical body as an aid to the proper development of the mind.

The Gymnasium

Carroll College possesses a modern and well equipped gymnasium. It measures 40 x 73 feet, is eighteen feet in height, and is finished in Georgia pine. The gymnasium, together with the locker rooms and shower bath, occupy the ground floor of Voorhees Hall. There are windows on three sides affording sufficient sunlight, and careful attention is given to ventilation. The inside lighting is by caged electric lights. There are two handball courts in the gymnasium, and a commodious basket-ball court. Above the gymnasium floor is a good running track, and a punching bag platform.

The Equipment

The apparatus includes everything necessary for indoor athletics. In connection with the gymnasium are the bathrooms provided with both tub and shower baths, and with a sufficient supply of hot and cold water. Adjoining the men's bathroom is the locker room, where a convenient, roomy, and well ventilated locker is provided for the use of each student. This room is the dressing room for the members of the athletic teams.

Intercollegiate Athletics

The students of the college engage in football, baseball, and track athletics. Carroll is a member of the Wisconsin Intercollegiate Athletic Association and participates each year in a number of contests with neighboring colleges. Carroll College stands for clean wholesome athletics and adheres to the spirit, as well as the letter, of the regulations adopted by the conference colleges. While the college lends every encouragement to intercollegiate athletics, it requires that this work be subordinated to the regular work of the school. All intercollegiate contests are under the direction of the athletic association and the athletic committee of the faculty. The football and baseball teams, with their managers and captains, are responsible to the athletic association and look to it for support. No student who is deficient in any of his work will be permitted to participate in any intercollegiate contests.

General Information

STUDENT ORGANIZATIONS

Several voluntary organizations among the students serve to direct into useful channels the various phases of student interest and activity.

The Carroll Club

The Carroll Club is a thoroughly democratic organization, made up of all active members of the college, both students and faculty. The club stands in a supervisory relation to all other student interests in the school, and has for its purpose the stimulation, co-ordination, and direction of the "Carroll spirit." The club also has control of all such special events as those of Carroll Day, the Freshman-Sophomore Contest, College Exposition Day, etc.

Christian Associations

Two very active and prosperous Christian organizations, one the Young Men's Christian Association, the other the Young Women's Christian Association, provide a very pleasant center for the religious life of the college. These associations have their meetings for one-half hour at noon on Wednesdays, the young men and young women meeting in their separate halls. This meeting is frequently addressed by some member of the faculty or by one of the pastors or Christian workers of the city. These several services furnish the occasion and means of very great help and inspiration to all who attend, and they also promote a delightful Christian spirit in the life of the college.

These societies have provided and furnished attractive and homelike rooms for study and reading and conference, and welcome here all students of the college.

Musical Clubs

The four musical organizations of the college, the Men's Glee Club, the Choral Society, the Orchestra, and the Mandolin Club, supplement in a very practical way the work of the musical department of the college, and afford valuable training in chorus and orchestra work. A concert tour is made each year by the Glee and Mandolin Clubs.

Literary Societies

Three societies for literary culture—Adelphi for young men, and Carrollian and Philalethian for young women—provide centers and stimulus for the impulse to independent, original literary expression. Their work consists of debates, studies of individual authors, orations, papers, book reviews, and discussions of events of present interest. They have furnished and equipped in attractive manner the halls provided for their use in Rankin Hall of Science.

Oratorical League

The Carroll College Oratorical League is composed of representatives of the college classes, and has control of the local debates and oratorical contests. Two preliminary contests, and one final contest, in oratory are held each year. The winners in the final contest are the representatives of the college in the annual contest of the Wisconsin Intercollegiate Oratorical Association.

Der Deutsche Verein

A very interesting feature of college life is the German Club, to which are admitted all students who have completed three years of German. This club meets on alternate Tuesdays from four till half past five. After a social half hour, in which only German is spoken, programs of varied interest are given, consisting of German songs, papers, recitations, and short plays. Occasionally a German lecture is presented.

Classical League

The Classical League aims to advance the study of Latin and Greek. Interest is awakened in the study of Greek and Roman antiquities by a presentation, at semi-monthly meetings, of papers of a general nature, by members of the faculty and advanced students. Dissertations, book reviews, and articles in the *Classical Journal* and *Classical Philology* are frequently discussed. Besides this, the league is a member of the Latin League of Wisconsin, and has the right to be represented in the annual intercollegiate contest in Latin. The winner of this contest receives a cash prize of $250 and a gold medal. Membership in this organization is open to all teachers and students interested in classical studies.

Athletic Association

The Athletic Association represents the organized athletic interests of the college. Under its auspices the intercollegiate games in which the college participates are carried on. Detailed information of the athletic work of the college will be found in the statement of the Department of Physical Education.

PUBLICATIONS

The Carroll Echo

For a number of years the students have edited and published a paper under the name of *The Carroll Echo*. Not only has this stimulated literary production among the students, and given happy expression to many phases of college life, but it has been a welcome visitor to homes of the alumni and other friends, and has been an effective medium of communication between the present student body and former students.

Hinakaga

The junior and senior classes issue biennially *Hinakaga*, a publication richly illustrated and representing all the varied interests of college life.

The Bulletin

The Bulletin is issued quarterly by the faculty of the college.

PUBLIC WORSHIP

A general convocation of the college is held at mid-day of each day that college is in session. A part of the time of this assembly is given to devotional purposes and a part to the presentation and discussion of matters of interest and importance to the college community.

A religious conference is held on Monday evening which proves in many ways helpful and stimulating to the life of the college.

The college maintains no regular Sunday service, but the churches of the city are glad to welcome the students to their fellowship and each student is expected to find a place in one of these churches.

LECTURES

At frequent intervals lectures are given in the college chapel by men of note and distinction in the professions and in the various departments of business activity, an arrangement which affords the student the stimulus of contact with men who are leaders in thought and action.

PRIZES

The Temperance Committee of the General Assembly of the Presbyterian Church has authorized the faculty of Carroll College to offer to the students of the college an annual prize of twenty-five dollars for the best essay on some phase of the temperance problem.

Carroll College is a member of the Intercollegiate Peace Association. Membership in this association secures for the students of the college the right of participation in the competition for the annual prize of seventy-five dollars for the best oration on some phase of the peace problem.

SOCIAL LIFE

The demands of young people for recreation and their need of social culture and enjoyment receive recognition and encouragement. Students are given as much liberty in social affairs as is consistent with the standard of scholarship maintained and with the responsibility of the faculty for their welfare. Social events, in which members of the school participate, and class parties, are usually restricted to Friday and Saturday evenings, and are always under the supervision of the faculty.

BOOK STORE

A college book store is maintained, on the ground floor of Main Hall, where books and other necessary supplies may be obtained at reasonable prices.

EXPENSES

College Fees

The college year consists of 36 weeks and is divided into two semesters. Tuition bills are due in advance. No reduction is made for brief absences. If the tuition is not paid within two weeks of the beginning of the semester, $1.00 is added. The rates are as follows:

College: per year, $60.00.

Preparatory department: per year, $40.00.

Commencement expenses for graduation:

From the College: $5.00.

From the Preparatory Department: $2.50.

At the request of the students, an athletic fee of $1.50 per semester and an oratorical fee of fifty cents per semester are charged.

The fixed concession in fees to special classes, including clergymen, has been discontinued.

Laboratory Fees

In all laboratory courses small fees are charged to cover the cost of material used in the laboratory. The fees, per semester, are as follows:

Chemistry: $5.00.
Biology 18, 21 and 23: $1.00.
Biology 14: $2.00.
Biology 15: $1.00 per hour of credit.
Biology 11, 12, 13, 17, and 19: $3.00.
Biology 20: $4.00.
Biology 22: $5.00 for entire course.
Biology 16: $6.00.
Home Economics: Cost of material.
Physics: $3.00.
Mineralogy: $2.50.
Geology 11: $1.00.
Surveying: $3.50.

An annual breakage deposit of $5.00 in Chemistry will be required of each student. This deposit, or such part of it as has not been charged against the student for breakage, will be refunded at the close of the year.

Laboratory fees must be paid in advance. Under no conditions will they be refunded.

Living Expenses for Men

A very important part of the expenses for students is the cost of living; therefore every effort is made to keep this as low as possible. Excellent rooms, convenient to the college, may be had at from seventy-five cents to $2.00 per week. Table board is furnished by the college at $3.50 per week. Board may be obtained in private families at a rate similar to that charged by the college.

Living Expenses for Women

The rooms of the Elizabeth Voorhees Dormitory are single and double, or may be used en suite. Each occupant of a room has her own closet. The price of rooms, including heating and

lighting, ranges from $18.50 to $31.50 per semester. The rate for table board is $3.50 per week. Rooms are furnished with college cot, mattress, pillow, study chairs, dresser with mirror, wash stand, bowl and pitcher. The floors are of hard wood and students desiring rugs may furnish them. Bedding, window curtains, couch covers, table covers, napkins, and all other articles of convenience or adornment are furnished by each student.

Single rooms are 9 x 13 feet, and double rooms 12½ x 13½ feet; windows, 38 x 64 inches; study tables, 2 x 3 feet.

Application for admission should be made early. A deposit of $5.00 is required from those engaging rooms, and a choice will be made according to such application. The deposit may be returned if the engagement is cancelled three weeks before the opening of the semester.

Opportunities for Self-Help

There are many opportunities in the city for self-help. Most students desiring to help themselves can secure a considerable portion of their expenses during the year. Several young ladies find opportunities as helpers in homes for their board, and young men are able to find work in the homes, offices and factories of the city.

SUPERVISION

While it is the purpose of the college to encourage self-government and to grant to students as much freedom as is consistent with their best interests and with the good order of the school, yet it is deemed necessary that students should be at all times under the supervision of the faculty.

Non-resident young women are required to live in the dormitory unless special permission to live elsewhere be given by the faculty.

Whenever it becomes apparent that a student's influence is harmful to other students, he will be requested by the faculty to leave the school.

Students who have not at least a fair ability to acquire knowledge, and a reasonable willingness to study, will not be allowed to remain in the school.

HOME ECONOMICS LABORATORY

Attendance

Students must be prompt and regular in attendance. Tardiness and absence are fatal to good work. Persistence in these habits cannot be tolerated. The authorities of the college believe that the measure of value which the student derives from his work is adequately estimated, not by written examinations alone, but also by his presence and attention in the daily class exercises. No excuse, therefore, is granted for absences from recitations, except by action of the faculty in very special cases. Work may be made up; thus the daily grade is raised, but a deduction must be made from the final grade of the semester. For absences equal in number to the number of hours for which the course is scheduled for exercises per week the final grade is reduced one degree; thus A+ becomes A. For absences in excess of this limit a double deduction is made. As soon as a student is absent more than one-tenth of the entire number of recitations in any subject he is reported to the dean. Any student absent from more than 15% of the regular recitations in any subject will be suspended from the course.

Students are required to attend the daily chapel service, and a morning service on Sunday in the church of their choice, determined at their entrance.

Students absenting themselves from classes immediately preceding or immediately following any regular or appointed vacation during the school year, shall be required to take an examination on the subjects missed and to pay a fee of one dollar for the first, and fifty cents for each additional subject so missed. For each day's absence following the first a fee of one dollar shall be required. Before being admitted to examination for reinstatement each student must present to his instructor a receipt from the college treasurer indicating that the above named fees have been paid. No instructor is permitted to exempt any student from these requirements unless furnished with an excuse which has been endorsed by the faculty.

Study Hours

Students are required to keep regular study hours, setting apart at least two hours each evening, or the equivalent of this, for home study. Social affairs are discouraged on the four evenings of the school week. Social gatherings must be reported to the President in advance and his approval secured.

Examinations and Grades

Such tests and recitation period examinations are given from time to time as instructors may think necessary. At the close of each semester, four days are set apart, on which instructors give examinations covering a part, or the whole, of the semester's work. Full reports, embracing the work of each semester, are sent to the parents for their inspection.

Any student who shall be absent from any examination, quiz, or test, or who shall have forfeited his class standing by absence or otherwise, shall be required to take a special examination and to pay a fee of one dollar for such examination.

Any course dropped without faculty consent obtained in advance shall be counted a failure.

When a student has failed or has been conditioned in a subject the work should be completed at as early a date as possible, and such work must take precedence over elective or advanced work. A condition not removed during the semester following that in which it is imposed becomes a failure. All failures and conditions must be made up before a degree will be granted.

Degrees Conferred, 1913-1914

Bachelor of Arts

Marjory Bennett
Barbara Agnes Bever
Margaret Edwards Clark
Georgiana Esther Colby
Beatrice M. Howard
Florence Jane Morris
Agnes Josephine Nohr
Margaret Daisy Rodger
Grace Elizabeth Schilling
Laura May Shoemaker
Frances Louise Upham
Juliet Weeks
Mooshie Sargis Benjamin
John Knox Benton
Clarence P. Blekking
Donald Christy Brown
Donald Copeland Bruns
Irving Earl Campbell
Zachariah Davies
Harry Arthur Ellman
Herbert H. Getchell
Clarence Wesley Gifford
Howard Albert Hartman
Lawrence Alban Johnson
Harry Carl Kuhnert
Henry Rhodes Lee
Floyd Stanley McKenzie
Lester Albert Means
Harrison Walter Mussehl
Ronald Elmer Parmenter
Edward Charles Raue
Oliver Charles Saunders
George Christian Schmid
Harold D. Sechler
Milburn Eppley Stabler
Arthur A. Thiele
Ray Bennett Weaver
William Thomas Williams
Carl Frederick Young

Bachelor of Music

Cornelia Carrier Weaver

Bachelor of Oratory

Alice Palmer Morris

Roll of Students

COLLEGE

Seniors

Apitz, Clara Margaret	Bessemer, Mich.
Burch, Edna Lucile	Greenwood
Cole, Florence Taylor	La Porte, Ind.
Crary, Zenanna	Streator, Ill.
Craven, Norma Bell	Waukesha
Fay, Isabel Margaret	Waukesha
Hamilton, Charlotte Jean	Westfield
Hanson, Jean Luella	Waupaca
Hardie, Mae Emeline	North Bend
Sweemer, Aletta	Milwaukee
Warner, Florence MacCordell	Oconomowoc
Watt, Grace Alberta	Waukesha
Williams, Inez	Beaver Dam
Wolf, Esther Lillian	Chicago, Ill.
Anderson, Oscar Ernest	Valley City, N. D.
Bill, Kenneth Geer	Genoa Junction
Boeck, Christian Frederick	Waukesha
Breese, Clinton Samuel	Waukesha
Edwards, Paul Grey	Milwaukee
Gilham, Wyn Frederick	Wausau
Jaeck, Otto Richard	Waukesha
Jones, DeWitt Owen	Wales
Kuranz, Arthur	Bangor
Lockman, Earl Adelbert	La Crosse
Martin, Henry Arthur	Fond du Lac
McTavish, Maxwell Raymond	Marshfield
Miller, Laurence Adams	Beloit
Moses, John William	Waukesha
Otten, John Springer	La Crosse
Paddock, Benjamin Eger	La Valle
Raue, Eugene Frederick	Omaha, Neb.
Risch, Ralph	Milwaukee
Robinson, Glenn	Neillsville
Salisbury, Lee H.	Edgerton

Smith, Wilfred	Chippewa Falls
Snyder, Andrew Joseph	Waukesha
Tower, Harold Halliburton	West Salem
Winton, Howard Abram	Prospect

Juniors

Clemens, Ruth	Ironwood, Mich.
Connell, Ruth Marian	Waukesha
Evans, Grace Imogene	Waukesha
Griswold, Lucy	Horicon
Jackson, Ruth Susan	Chicago, Ill.
Link, Margaret	Superior
McGooden, Swersie	Chicago, Ill.
McKee, Gladys	Aledo, Ill.
Sensor, Helen Mead	Kalamazoo, Mich.
Seymour, Ida	Ting Chow, China
Tibbitts, Blanche Mary	Melrose
Weaver, Gladys Betty	Pewaukee
Wheeler, Dora May	Waukesha
Williams, Bessie Ruth	Chicago, Ill.
Zepp, Bertha Elizabeth	Edgar
Ackley, Henry Breck	Waukesha
Anderson, Douglas Ostrom	Milwaukee
Bass, Edward C.	Waukesha
Boeck, Franklin Carl	Waukesha
Boortz, Harvey Edward	Waukesha
Carnahan, Carroll	Mauston
Chapin, Addison Hobart	Milwaukee
Desreumaux, Ernest Oscar	Oconto Falls
Dewar, William Nelson	Harrisburg, Ill.
Hafeman, Walter Frederick	Horicon
Hollenbeck, George Milford	St. Croix Falls
Ibara, Yosushi	Uwajirua, Japan
Imig, Wilbur Scott	Waukesha
Lucast, Edmund Morton	Waukesha
McMillan, Daniel Floyd	Oconto
Overton, Samuel Watkins	Waukesha
Perry, Lloyd Arthur	Oconomowoc
Phillips, Clarence Arthur	Endeavor
Porlier, Harold James	West DePere
Winchester, George Whitefield	Ironwood, Mich.

Sophomores

Albright, Hettie Madeline	Waukesha
Alexander, Gertrude	Ironwood, Mich.
Burrow, Alice Lenore	Beaver Dam
Connell, Elsie Barbara	Menomonee Falls
Davis, Kathryn Clyde	Richland Center
Elder, Odessa Mae	Muscoda
Hamilton, Evelyn Leona	Westfield
Haylett, Ruth	Evansville
Johnston, Hazel Wright	Illiopolis, Ill.
Johnstone, Margaret	Oak Park, Ill.
Kilpatrick, Mabel	Waukesha
Lees, Hazel Olive	Milwaukee
Link, Jessie Merriam	Superior
Loose, Kathryn	Waukesha
McNamara, Elsie	Ironwood, Mich.
Mills, Margaret	Waukesha
Neubecker, Lilian Edna	Waukesha
Neupert, Freda Lenore	Lake Mills
Putney, Jean Marion	Waukesha
Richardson, Vida	Oak Park, Ill.
Rosenquest, Helen Churchill	St. Paul, Minn.
Stanton, Helen Angeline	Waukesha
Stephens, Aurietta Ida	Prairie du Sac
Strong, Charis	Canton, Ill.
Strong, Lillian May	Waukesha
Sweemer, Alice Margaret	Milwaukee
Sweemer, Harriet Edna	Milwaukee
Thomas, Alvira Susanna	Wales
Tibbitts, Ellyn Josephine	Waukesha
Van Vranken, Hazel Kirk	Waukesha
Van Wart, Marjorie	Evansville
Wied, Ida Carol	Waupaca
Wilkinson, Ruth	Shullsburg
Worden, Gladys	Oxford
Young, Esther Adelaide	Neenah
Caldwell, Morris G.	Lodi
Coumbe, John Robert	Blue River

Davis, Malvin	Reedsburg
Davis, Ralph	Richland Center
Fox, Eugene Carleton	Ironwood, Mich.
Gordon, Edwin Carlisle	Superior
Halloran, Milo Edward	Oconto
Johnson, Gordon Gossman	Amherst
Johnson, Lester Jackson	Waukesha
Kellar, Charles Clarence	Cloquet, Minn.
Mason, Gilbert David	Genesee Depot
McLean, Arthur Lloyd	Mather
Merten, John Gregory	Waukesha
Moak, Elmer Oscar	Oconto
Mohlke, George Charles	Nekoosa
Montgomery, Frank Talbot	Wausau
Mundt, Louis Raymond	Marinette
Mutchler, Wilson Brown	Madison
Notbohm, Lex William	Dousman
Peck, Adelbert William	Mukwonago
Pelkey, Heber Hilvay	Oconto
Pettingill, Harold Walter	Fond du Lac
Reynolds, Lyle Scott	Horicon
Rogentine, John Daniel	Cloquet, Minn.
Shepard, Jay Merrill	Waterloo
Sydow, Herbert George	Waukesha
Vayette, Forrest Albert	Reedsburg
Westphal, Edward Pride	Wellston, Ohio
Williams, Chester Henry	Ironwood, Mich.
Youmans, Henry Augustine	Mukwonago

Freshmen

Adams, Frances Drake	Chicago, Ill.
Bibby, Gwynefred Jane	Galesville
Biersack, Marguerite Frances	Beaver Dam
Cambier, Jane Julia	Oshkosh
Casey, Ethel Frances	Randolph
Dockstader, Dorothy Virginia	Sioux Falls, S. D.
Hadfield, Florence Kathryn	Waukesha
Hudson, Pauline Lillian	Waukesha

Hughes, Josephine Jane	Waukesha
James, Verna	Rosendale
Johnson, Marian French	Colgate, N. D.
Judin, Helen Edith	Waukesha
Juza, Mildred Arvona	Racine
Macneil, Ruth Florence	Horicon
Marsh, Kathryn Julia	Black River Falls
McCumber, Mildred Mabel	Rosendale
Pierce, Cordelia Clement	Waukesha
Riley, Maysel	Pardeeville
Ritchie, Henrietta Beatrice	Rice Lake
Ritchie, Mary Young	Rice Lake
Rudolph, Verna Florence	Manitowoc
Sebert, Elsie Amelia	Black Earth
Somerville, Frances	Superior
Spickard, Gladys Virginia	Richland Center
Van Dewall, Hilda Robena	Cedar Grove
Vincent, Vera Elizabeth	Waukesha
Weaver, Glenn Gertrude	Pewaukee
White, Madeline Gertrude	Eau Claire
Antholz, Henry J.	Manitowoc
Atwood, Edward Philo	Janesville
Boyle, John Patton	Fond du Lac
Bradley, Herbert Nelson	Omro
Brown, Clyde Stephen	Waukesha
Buckley, William Robert	Waukesha
Burch, Frank Lester	Oak Park
Carpenter, Royce Cain	Pardeeville
Conley, Brooks Lawson	Blandville, W. Va.
Dewey, Merrill	Lake Mills
Edwards, Everett Carlyle	Ashland
Edwards, William Henry	Milwaukee
Filbey, Lloyd Allen	Fond du Lac
Flynn, John Bernard	Reedsburg
George, Karl Willimann	Menomonee
Giroulx, Calvin Albert	Green Bay
Graaskamp, Lester William	Milwaukee
Grotenhuis, Ulysses	Cedar Grove

Hammond, Floyd	Mukwonago
Hanson, David Edwin	Neenah
Hefty, Paul	New Glarus
Herzog, Lewis	Waukesha
Hill, Leslie Barron	Endeavor
Howard, Frank Emerson	Omro
Hoelz, Simon John	Burlington
Janney, Frances Rush	Richland Center
Johnson, Leo Lawrence	Waupaca
Johnstone, Frederick Ensign	Oak Park, Ill.
Jones, Lynne	Lake Mills
Koplein, Percy	Weyauwega
Lee, Jason Jeffrey	Waldo
Marsh, Maitland Barnett	Omro
McGreaham, John Adair	Shawano
Murray, Robert Oliver	Tomah
Papa, Ernest Paul	Solarino, Siracusa
Parmenter, Clifford Arleigh	Neenah
Ready, Frank Lane	Hartington, Neb.
Reese, Harry	Iron Mountain, Mich.
Ruste, Antony B. C.	Blue Mound
Salen, Herman Roy	Waukesha
Sanders, Lloyd Orville	Mt. Horeb
Sickles, Raymond	Tomah
Stafford, Ralph	Oxford
Stubenvoll, Kurt Hugo	Shawano
Tanghe, Walter Joseph	Milwaukee
Thurwachter, Loren Francis	Waukesha
Tourtellot, George Platt	Hudson
Urquhart, James Robinson	Oconto
Werra, Martin Conrad Joseph	Waukesha
Wright, George Frederick	Fond du Lac

Special Students

Aitken, Gladys Helen	Waukesha
Benson, Alice Edith	Chicago, Ill.
Bloom, Maude Evelyn	Spencer
Brockman, Ruth Sophia	Waukesha
Mills, Bianca Eliza	Waukesha

Opper, Clara Louise	Weyauwega
Siebeling, Alice Gertrude	Oostburg
Tanghe, Rose Ella	Milwaukee
Vick, Amanda Maria	Elkhart Lake
Van Dyke, Marion	Waukesha
Wolff, Marion Armada	Sheboygan
Hotaling, Charles Ellis	Altamont, N. Y.
Rosenmurgy, Jack	Brookfield
Sorenson, Thorval Levi	Racine

Preparatory Students

Gorder, Lalla Miller	Waukesha
Johnson, Laura Westcott	Colgate, N. D.
Mitzlaff, Olga Barbara	Chicago, Ill.
Seeley, Edith Stanhope	Milwaukee
Taylor, Phyllis Irene	Neenah
Baba, Jerry Peter	Uroomia, Persia
Caldwell, James Burrows	Oconto
Colton, Walter	Sheboygan
Dalton, Maurice James	Janesville
Fonteine, Earl Clayton	Cedar Grove
Hanson, Felix John	Lake Villa, Ill.
Hays, Robert Wilson	Milwaukee
Howard, Allen Maurice	Waukesha
LaBar, Richard Kenneth	Brookfield
Laughlin, Harold Donald	Waukesha
Law, Benjamin Harrison	Green Bay
Lindsay, Ernest	Lake Villa, Ill.
Mace, John Wagner	Lake Villa, Ill.
Madison, Henry Almond	Clifton, Ill.
McKowen, Roy Joseph	Calhoun
Scholl, Homer Edson	Milwaukee

MUSIC DEPARTMENT

Piano

Austerman, Mildred	Waukesha
Blair, Georgia	Waukesha
Brown, Etta	Templeton

Buck, Elizabeth	Waukesha
Crary, Hazel	Waukesha
Crary, Eleanor	Waukesha
Crary, Ward	Waukesha
Edwards, Paul	Milwaukee
Estberg, Margaret	Waukesha
Estberg, Frances	Waukesha
Elder, Odessa	Muscoda
Evans, Grace	Waukesha
Finch, Pauline	Waukesha
Ganfield, Dorothy	Waukesha
Hardy, Ruth	Waukesha
Holtz, Edna	Waukesha
Horne, Ella	La Crosse
Kimball, Dorothy	Waukesha
Korn, Elizabeth	Waukesha
Kuehn, Antoinette	Waukesha
Link, Jessie	Waukesha
Love, Mildred	Waukesha
Nichols, Louise	Evanston, Ill.
Schlossman, Edith	Waukesha
Seely, Edith	Milwaukee
Spickard, Gladys	Richland Center
Steinert, Georgia	Waukesha
Stolte, Rosalind	Waukesha
Vanderpool, Ethel	Nashotah
Vick, Amanda	Elkhart Lake
Votteler, Gretchen	Waukesha
Wolff, Marion	Sheboygan
Ackley, Henry	Waukesha
Giroulx, Calvin	Laona
Hays, Robert	Milwaukee
Howard, Frank	Omro
Korn, Earl	Waukesha
Reisner, Donald	Waukesha
Smith, Louis	Derry, Pa.

Voice

Adams, Frances	Chicago, Ill.
Austerman, Mildred	Waukesha
Blair, Georgia	Waukesha
Brockman, Ruth	Waukesha
Dockstader, Dorothy	Sioux Falls, S. D.
Douglas, Marjorie	Waukesha
Haylett, Ruth	Evansville
Holtz, Edna	Waukesha
Jackson, Ruth	Chicago, Ill.
McGooden, Swersie	Chicago, Ill.
Mischler, Vinnette	Waukesha
Seymour, Ida	Ting Chow, China
Siebeling, Alice	Oostburg
Tichenor, Flossie	Waukesha
Tullar, Myrtle	Waukesha
Van Dewall, Hilda	Cedar Grove
Vick, Amanda	Elkhart Lake
Wolff, Marion	Sheboygan
Coumbe, Robert	Blue River

Other Music

Burch, Edna	Greenwood
Davis, Katherine	Waukesha
Loose, Kathryn	Waukesha
Strong, Lillian	Waukesha
Wheeler, Dorothy	Waukesha
Coumbe, Robert	Blue River
Edwards, Paul	Milwaukee
Edwards, Henry	Milwaukee
Fox, Carleton	Ironwood, Mich.
George, Carl	Menomonee
Gordon, Edwin	Superior
Howard, Frank	Omro
Kennedy, Claude	Waukesha
McTavish, Raymond	Marshfield
Miller, Laurence	Beloit
Petry, Edward	Waukesha
Risch, Ralph	Milwaukee
Tourtellot, Platt	Hudson

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